



**NAVAL
POSTGRADUATE
SCHOOL**

MONTEREY, CALIFORNIA

THESIS

**IN SUPPORT OF CIVIL AUTHORITY: IS THE ROLE OF
MILITARY SUPPORT FOR NATIONAL SECURITY IN
JEOPARDY?**

by

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March 2006

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REPORT DOCUMENTATION PAGE*Form Approved OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE March 2006	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE: In Support of Civil Authority: Is the Role of Military Support for National Security in Jeopardy?		5. FUNDING NUMBERS	
6. AUTHOR(S) Robert R. Henderson			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.			
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited		12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) Dependence upon the National Guard for civil support during major domestic incidents is an integral part of homeland security planning. This dependence is well-founded in a review of the Guard's historic roles in homeland security, but national and world conditions are quite different today from what they were when the Guard first took on this role. These differences may be creating a drain on its capabilities that is untenable on a long-term basis. Continuing use of the National Guard for homeland security—at least at its present level—may seriously endanger homeland defense. From the perspective of civil authorities, continuing dependence upon a questionable resource may prove devastating.			
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14. SUBJECT TERMS Military support to civil authority, critical incident management, homeland security, disaster management		15. NUMBER OF PAGES 83	
16. PRICE CODE			
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18

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SUPPORT FOR NATIONAL SECURITY IN JEOPARDY?**

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Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL
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ABSTRACT

Dependence upon the National Guard for civil support during major domestic incidents is an integral part of homeland security planning. This dependence is well-founded in a review of the Guard's historic roles in homeland security, but national and world conditions are quite different today from what they were when the Guard first took on this role. These differences may be creating a drain on its capabilities that is untenable on a long-term basis. Continuing use of the National Guard for homeland defense—at least at its present level—may seriously endanger homeland security. From the perspective of civil authorities, continuing dependence upon a questionable resource may prove devastating.

This report considers the mutual impact of homeland defense and security roles on the National Guard, and how these conflicting responsibilities may be decreasing its ability to support civil authorities. It provides a view of one very possible future that will present significant problems for emergency planners.

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I. INTRODUCTION

Within the United States, local jurisdictions have historically depended heavily upon the National Guard during major domestic incidents. Under Homeland Security guidelines, the Guard is still considered a primary responder when local resources are overwhelmed, but the reality is the Guard is not currently able to meet both its Homeland

Defense and Homeland Security obligations. This thesis uses a realistic, worst-case scenario to analyze and assess how existing limitations on Guard resources could impact critical incident response and recovery operations, and offers some recommendations for addressing the problems this void in anticipated resources may lead to.

Following the 2001 attacks on the World Trade Center and Pentagon, a major shift in focus toward homeland security and domestic threats has occurred. Studies, policy statements and myriad miscellaneous documents have been distributed that outline perceived prevention and response requirements, particularly for large scale weapons of mass destruction (WMD) attacks on U.S. soil.

Many of these documents speak to the need to prepare and support first responders who will carry the brunt of responsibility for initial response and recovery. These same documents also point to the need to provide additional resources when major events, natural or manmade, overwhelm local jurisdictions. Responsibility for providing these resources has been shared among various federal agencies, including the Federal Emergency Management Administration (FEMA) and its parent agency, the Department of Homeland Security (DHS); however, practical responsibility for providing most manpower needs, including specially trained and equipped units, has fallen on the military through its role in support of civil authorities. During 2003, for example, the

latest year for which data is currently available, the Department of Defense responded to seventy-five separate requests for assistance.¹

Dependence upon the military for civil support following a major incident follows a traditional path, but changing conditions may now make that path undependable. Given current and projected needs for military resources in support of its homeland defense role, factoring these same resources into security roles as well may be stretching the military beyond its current capabilities. Depending upon these resources may also create a tremendous backlash during and after an incident if the very resources depended upon are not available.

What is the collective dependence of our communities on military resources during and immediately following major disasters? How dependable are those resources likely to be in the future? This paper focuses on these important questions, and presents some thoughts on how jurisdictions might face the loss of such a key resource.

¹ Paul McHale, “Address to the 108th Congress— Subcommittee on Terrorism, Unconventional Threats and Capabilities, Committee on Armed Services” (Washington, D.C.: United States House of Representatives, March 4, 2004).

II. KEY TERMS

One very real problem facing emergency planners is the lack of a universal set of terms. What is homeland security? Who should be considered a first responder? What is a weapon of mass destruction? Understanding what each of these key terms means is critical to understanding what this paper is trying to define. Therefore, a small number of the more important ones will be defined from the start.

Homeland Security—The federal government officially defines homeland security as “a concerted national effort to prevent terrorist attacks within the United States, reduce America’s vulnerability to terrorism, and minimize the damage and recover from attacks that do occur.”² Within the federal government, though, there is a lack of strict adherence to this definition. The Department of Defense for example, includes both military support to civil authorities in response to terrorist events, and such support for other kinds of natural and manmade disasters as well.³

Even the Department of Homeland Security commingles terrorist and non-terrorist events. Both their mission statement and set of strategic goals list a more generic meaning for the term than simply including acts of terrorism.⁴

Because this paper discusses general response to various kinds of domestic incidents, the more inclusive definition shall be employed. Homeland security, therefore, refers to any kind of incident, natural or manmade, that threatens the safety of a community and its residents.

Weapons of Mass Destruction—Weapons of mass destruction, or WMD, events are the focus of much discussion and concern over possible terrorist attacks, yet there continues to be significant confusion over what the term really means.

² *National Strategy for Homeland Security* (Washington D.C, Office of Homeland Security, July 2002), 2.

³ McHale, “Address to the 108th Congress— Subcommittee on Terrorism, Unconventional Threats and Capabilities, Committee on Armed Services.”

⁴ Department of Homeland Security, http://www.dhs.gov/dhspublic/theme_home1.jsp [Accessed November 3, 2004].

WMD is an expression originally employed by the military to describe attacks using either chemical or biological agents or nuclear weapons. As concerns about the possible use of such weapons by terrorist groups began spreading, the term was picked up by non-military sectors as well, but the original military definition was retained.

Several years ago, growing concerns about radiological disbursement devices (RDD's) or “dirty bombs” lead to a distinction being drawn between a true nuclear device and one that uses conventional explosives to disburse radiological material. Thus the initial acronym, CBR (chemical, biological, radiological) was expanded to CBRN to include both kinds of devices.

This definition remained in effect through 2003. As a consequence, both the bombing of the Alfred P. Murrah federal building in Oklahoma City and the 9/11 attacks were initially not considered WMD events even though the amount of devastation and the number of casualties, especially in the latter attacks, was enormous.

Beginning January 2005, the Office for Domestic Preparedness (ODP) modified the term WMD to include explosives (CBRNE). Although there are other definitions in use, including ones in the U.S. Code and Defense Department documents, this particular one is best suited to planning and response needs for local jurisdictions. Therefore, it will be used for this paper as well. A WMD event is one that uses any chemical, biological, radiological, nuclear or explosives device in a manner that does or could cause a significant number of casualties or damage.

First/Emergency Responders—These terms have come to be used interchangeably, but the list of included disciplines differs somewhat among various jurisdictions. The Office for Domestic Preparedness includes ten different disciplines in this category:⁵

- Emergency Management
- Law Enforcement
- Emergency Medical Services

⁵ Office for Domestic Preparedness, https://www.chds.us/public/spd.cfm?spi=app_odpprocess2 [Accessed February 14, 2005].

- Public Health
- Fire
- Public Safety Communications
- Governmental Administration
- Public Works
- Hazardous Materials Personnel
- Health Care

Some states have augmented this list. In California, for instance, there are now a total of fourteen disciplines including the listed groups plus private security, cyberspace, agriculture and non-profit/not-for-profit organizations.⁶ For this paper, however, the term will be limited to the original ten groups.

The terms I have elected to define, and the particular definitions presented, were selected to create a common basis for issues raised in this paper. They are by no means the only workable definitions available or key terms possible. What is imperative is getting beyond the confusion often found when employing terms using myriad definitions. That practice has forced a degree of confusion that is stalling our abilities to collectively address critical homeland security issues.

⁶ LTC William A. Hipsley (unpublished speech, Homeland Security Conference, Sacramento, CA, May 3, 2004).

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III. RESEARCH METHODOLOGY

Based on a preliminary literature review, it became evident that little has been written that directly addresses the issues raised by this paper. Consequently, the research methods selected consisted of a two-prong approach.

The first involved an extensive review of journals, periodicals and books for anecdotal information. With the assistance of Naval Postgraduate School librarians, a watch list of related topics was established. Through that list, and subsequent monitoring of articles and books, more than one hundred possible sources were identified and reviewed, leading to the references listed at the end of this paper.

The second involved a series of interviews with subject matter experts in the areas of emergency planning, military operations (emphasis on logistics and military support to civil authority) and, eventually, to command level personnel from the National Guard.

Interviews were conducted in person except for the majority of National Guard personnel who were interviewed via e-mail or telephone.

Emergency planners were selected to represent small, medium and large jurisdictions, and all were selected because of their level of personal experience and established expertise. Military operations individuals were selected for their expertise in strategic military planning and resource utilization. National Guard personnel were selected on the recommendations of staff from the Center for Homeland Defense and Security, Monterey and the Defense Resource Management Institute, Monterey.

Even though this area of research gives rise to substantial subjectivity, a decision was made to allow for free-form responses to a set of generic questions. Since the essence of the value placed upon subject matter experts depends upon their individual views, it was felt that any attempt to standardize those views would, in effect, eliminate the value of the experts' opinions. The main questions presented were:

- How important is military support to civil authority in response and recovery operations following major disasters (emergency planners)?
- How much of this kind of support is relied upon during pre-event planning processes (emergency managers)?
- What kinds of military support to civil authority are available (all)?
- Are their alternate resources available if the military is unable or unwilling to provide requested resources (all)?
- What are the factors currently, and in the foreseeable future, affecting the availability of military resources to support civil authority (military and Guard)?
- Can you identify a trend that is and/or will impact military support to civil authorities, especially that provided by the National Guard (military and Guard)?

Based upon the input received, emergency managers were asked two additional questions:

- What would be the effect on response and recovery operations following a major disaster if anticipated military support was not available and no other alternative was identified?
- What kinds of planning efforts have there been to identify contingencies should military support not be available?

The responses received were fairly consistent. They are discussed in Chapters V and VI.

IV. MILITARY ROLES IN SUPPORT OF CIVIL AUTHORITY

A. OVERVIEW

For more than two hundred years, the U.S. military has played a significant role in protecting U.S. communities against a variety of dangers. While the level of that role has changed many times, it has never completely disappeared. Indeed, the use of the military in support of civil authority in particular has been so prevalent it is no wonder that we have again called upon them to play a pivotal role in the war on terrorism.

From combat air patrols (CAP's) over our cities to guarding critical infrastructure, the military's presence has certainly been obvious since 9/11. Their responsibilities in these areas are outlined in numerous documents including the National Strategy for Homeland Security, Homeland Security Joint Operating Concept and the Joint Doctrine for Homeland Security.⁷ Most recently, the Joint Chiefs' Strategy for Homeland Defense and Civil Support outlines the types of DoD support that may be provided to state, local and tribal jurisdictions.⁸ In addition, they continue to provide their historical support during non-terrorist events as well, and they have assumed a major role in foreign military operations around the world.

Although the military hierarchy is predictability expressing support for their multiple roles, cracks are beginning to appear in their united front, up to and including doubts recently expressed by Secretary of Defense Donald Rumsfeld. Even he is beginning to question the military's ability to meet these multiple challenges from the

⁷ *National Strategy for Homeland Security* (Washington D.C., Office of Homeland Security, July 2002).

Homeland Security Joint Operating Concept, GO/FO Draft (Washington D.C., Department of Defense, October 2003).

Joint Chiefs of Staff Joint publication 3-26, Joint Doctrine for Homeland Security, second draft (Washington D.C., Department of Defense, September 2003).

⁸ *Joint Chiefs of Staff Joint publication 3-26: Strategy for Homeland Defense and Civil Support* (Washington D.C., Department of Defense, June 2005).

war on terrorism—at least circumspectly—lending further credence to concerns that military support for civil authorities may be in jeopardy.⁹

Are the military’s current roles concurrently sustainable? Can it accomplish its homeland security and general civil support missions without jeopardizing its homeland defense duties? If not what will be the likely course of action followed? Will the military’s commitment to combat readiness overcome its stated support to homeland security? A partial answer may be found through understanding just how strongly its defense role is supported.

The primacy of that mission, at least in the minds of the military command, is made evident in the Department of Defense’s own publication on homeland security joint operations. That document states, “The most important purpose for DOD [Department of Defense] is the defense of the U.S. Homeland against external threats and foreign aggression”.¹⁰ Given the view that all roles are not equal, it is a logical assumption to believe that, if all roles cannot be supported, the defense role will win out.

This paper attempts to identify just what the likelihood of such a loss in support would be, what that loss would translate into in terms of reduced or eliminated resources, and extrapolates what the impact on local jurisdictions could be. In fact, these questions form the central theme of this research project.

If military support is built into response and recovery contingencies, and that support does not materialize, its loss may be devastating in terms of our ability to mitigate and recover from a major incident—natural or man made. Just how such a loss of support might affect operations, therefore, is clearly an issue that needs addressing.

The ultimate purpose of the paper is to gain recognition for the fact that our current plans may be faulty to a dangerous degree. If military assistance to civil authority is truly jeopardized, we need to collectively recognize this fact, and to identify just how such a loss will impact critical incident management, and how we can overcome that loss.

⁹ Donald Rumsfeld, *Subject: Global War on Terrorism*, memo to General Dick Myers, Paul Wolfowitz, General Pete Pace and Doug Feith (Washington D.C., Department of Defense, October 16, 2003).

¹⁰ *Homeland Security Joint Operating Concept* (Washington, D.C., Department of Defense, October 27, 2003), 12.

While it is unlikely that military support would not be forthcoming in the aftermath of a weapons of mass destruction event, there is at least some indication that the type and speed of the response may be negatively impacted by other responsibilities. There is also some evidence that, in the future, other kinds of critical incidents may not receive the kind and level of support likely in the case of the WMD incident. This developing trend becomes more evident when the full historical place of military support is examined.

B. HISTORICAL PERSPECTIVE

Why have we turned to the military as a major resource in efforts to secure the homeland? Certainly one reason is the history of the military's role in similar situations. In his article on domestic use of the military, Richard Kohn, a professor of history at the University of North Carolina at Chapel Hill, points out that domestic security was initially one of the U.S military's primary missions.¹¹

Both homeland defense and security roles for the National Guard in particular can be traced back to their original beginning with the establishment of the first U.S. militia in Massachusetts in 1636.¹² Prior to the 1878 Posse Comitatus Act, it was used to suppress rebellions, control strikes, aid in health emergencies and perform numerous other traditional law enforcement duties.¹³ In fact, it still does provide major assistance in many such instances.

In a recent speech before Congress, Paul McHale, Assistant Secretary of Defense for Homeland Security, alluded both to the military's long tradition, even after the Posse Comitatus Act, of civil support, and to its more recent efforts as well.¹⁴

¹¹ Richard H. Kohn, "Using the Military at Home: Yesterday, Today and Tomorrow," *Chicago Journal of International Law* 4:1 (Spring 2003): 166.

¹² Major General Timothy J. Lowenberg (Adjutant General, Director, Military Department, State of Washington) unpublished manuscript, February 2005.

¹³ Kohn, "Using the Military at Home: Yesterday, Today and Tomorrow," 168.

¹⁴ McHale, "Address to the 108th Congress— Subcommittee on Terrorism, Unconventional Threats and Capabilities, Committee on Armed Services.".

To summarize, the military has traditionally played a major role in homeland security, making it all the more likely that it will continue to be called upon for the foreseeable future.

C. CURRENT ROLE OF THE MILITARY

Numerous documents reference the military's post-9/11 homeland security responsibilities. The National Strategy for Homeland Security describes three sets of circumstances that would cause the Department of Defense to become involved in homeland security. The first—which has been witnessed repeatedly—is “extraordinary circumstances” that would result in military missions such as combat air patrols and securing our critical infrastructure. The second is in response to an attack or natural disaster large enough to overcome local resources. The third is in mission-specific situations in support of other federal agencies (pg. 13). In another section, the Strategy outlines various forms of possible military support including “technical support and assistance to law enforcement; assisting in the restoration of law and order; loaning specialized equipment; and assisting in consequence management” (pg. 44).¹⁵

In his March 2004 presentation to Congress, McHale stated that the Department of Defense, when directed by the President or Secretary of Defense, “will provide military assistance to civil authorities to mitigate the results of disasters and catastrophes, including those resulting from a WMD attack.” In this same presentation, he mentions several particular areas of assistance available including protection of critical infrastructure, intelligence and communication, and aid in a variety of circumstances such as hurricanes, wildfires and suspected biological incidents.¹⁶

Another source of information on this issue may be found in the Joint Operating Concept that outlines several areas of possible assistance including Military Assistance to Civil Authorities (MACA), Military Support to Civilian Law Enforcement Agencies (MSCLEA), and Military Assistance for Civil Disturbances (MACDIS). It also lists three

¹⁵ *National Strategy for Homeland Security*, 13.

¹⁶ McHale, “Address to the 108th Congress—Subcommittee on Terrorism, Unconventional Threats and Capabilities, Committee on Armed Services.

responsibilities in the area of Emergency Preparedness (EP)—Continuity of Operations (COOP); Continuity of Government (COG); and Other Roles.¹⁷

Additional information on the types of assistance currently available may be found in the Department of Defense's own records as well. According to a recent General Accounting Office (GAO) report, The Department of Defense claims to have provided support for more than 200 non-military missions during fiscal 2001 and 2002. These missions included "assistance in fighting wildfires, recovering from tropical storms, providing support for national security events (such as the presidential inauguration and 2002 Olympic Games) and for other purposes."¹⁸

All of these documents suggest the kinds of events that will trigger military assistance, but few mention the specific resources available except for the more obvious ones. Much of the information on this question, therefore, must be extrapolated from actual incidents.

Some publicized examples of assistance have included use of military intelligence and communications capabilities (presidential inauguration and Olympic Games), and satellite photography (Mid-Atlantic sniper incidents). The Air National Guard has been used for combat air patrols (CAP's), drug interdiction and border security. The Army National Guard has been utilized for critical infrastructure protection, military base and border security, and response to natural disasters.¹⁹

D. ROLE OF THE NATIONAL GUARD

Some of the uses of the Air and Army National Guard have been mentioned, but simply listing the Guard as just one military force among others does not give them their just due. Based on a combination of publications and documented assistance provided during actual events, it is very clear that the primary responsibility for providing military response to homeland security events has been given to the National Guard.

¹⁷ *Homeland Security Joint Operating Concept, GO/FO Draft*, 10-11.

¹⁸ *Homeland Defense: DOD Needs to Assess the Structure of U.S. Forces for Domestic Military Missions* (Washington D.C., General Accounting Office, July 2003), 9.

¹⁹ For example, see: Kohn, "Using the Military at Home: Yesterday, Today and Tomorrow," 183.

For example, following 9/11 it was the Guard that provided critical infrastructure protection for hundreds of bridges and airports. In fact, they are still providing this protection in several places. This trend can also be seen in major incidents during the past few years when Guard units were the primary source of military assistance following earthquakes, floods, hurricanes and other natural disasters. The role of the National Guard as the primary resource for supporting civil authority is more clearly spelled out in the Joint Doctrine for Homeland Security, which identifies the Guard as “normally the first responder to CS [Civil Support] events.”²⁰

The Guard also provides assistance through their Weapons of Mass Destruction—Civil Support Teams (WMD-CST’s) that are designed specifically to provide civil support—a major departure from the duties of most other military units. The mission of these teams, which are scheduled to eventually be located in each state, is to respond to WMD events for support and assessment. According to the Joint Doctrine Report, these teams, which operate under Title 32 U.S.C., are “likely to be the first large-scale military responder to a WMD incident site or area.”²¹

What all of this means when taken together is that, while certainly not the exclusive provider of military resources in support of civil authority, the Guard is the most often called upon. It is the resource most often provided by the Department of Defense or through the authority of state governors.

When local jurisdictions require state and/or federal assistance to properly respond to and recover from major disasters, and military assistance is provided, that assistance almost always comes from the National Guard. Operating under either state or federal lead as authorized by federal statute, the Guard is generally the resource of choice for logistical support, security, disorder response and other kinds of services.

The decision to use this particular segment of the military is based on both logic and tradition.

²⁰ General Accounting Office, *Homeland Defense: DOD Needs to Assess the Structure of U.S. Forces for Domestic Military Missions*, 15.

²¹ Department of Defense, *Joint Publication 3-26 Joint Doctrine for Homeland Security Second Draft*, II-9.

1. Logic of Using the National Guard

Use of the Guard is logically dictated for at least three reasons:

Relative ease of activation—Guard units can be activated directly by governors under state status conditions (state funded/state controlled), under Title 32 authority (federally funded/state controlled) or under Title 10 Authority (federally funded and controlled). Under either state status or Title 32, the state retains command and control. No similar authority for direct control exists for either active duty or other reserve units.

Proximity—Guard units are based in all fifty states. This fact can minimize response times and logistics issues. In the San Francisco Bay Area, for example, there is only one major, active military base left—Travis AFB. On the other hand, there are myriad National Guard units, including a full-time Civil Support Team (CST).

Type of support available—Although there are certainly a wide variety of disasters that can fall on a community, most require similar kinds of responses. Most require either security and rescue personnel to maintain order and search for injured/trapped victims, medical personnel to treat the injured, transportation equipment and personnel to move resources and supplies or similar types of expertise. These are the kinds of trained personnel and equipment available through the National Guard.

When comparing these attributes with those of other kinds of military organizations, the logic of deploying the National Guard becomes fairly obvious.

2. Tradition of Using the Guard

Kohn points out that the National Guard and its predecessor organizations (colonial militias) is the oldest military force in the United States.²² Its history brims with examples of times and circumstances that guardsmen have been used to support civil authority. In fact, protecting their communities has always been one of the key reasons for the continuing existence of the Guard. From defending against Indian attacks to responding to acts of insurrection, the Guard has always been at the forefront in maintaining domestic order.

²² Kohn, “Using the Military at Home: Yesterday, Today and Tomorrow,” 166.

In contemporary times, the Guard has not only responded to terrorist attacks, but also to wildfires, tropical storms and national security special events as well as other high profile incidents that pose a great threat to the peace and security of the community. They have not served as true first responders, but provided a major resource when local jurisdictions became overwhelmed.²³

Given this historical role, especially when combined with the logic of the choice, it seems inevitable that the Guard would and should continue playing the pivotal role they have in the past when it comes to domestic security. However, their role in homeland defense is equally long and rich.

Throughout the 19th century, the Guard provided the bulk of troops during war times to augment a relatively small standing army. That role initially continued into the 20th century as well. During World War I, nearly half of U.S. Army forces were guardsmen. Although percentages dropped during World War II, National Guard units were still some of the first deployed and last to leave the theater.

During the Cold War, Guard involvement in battle shrunk somewhat, but members still served in Korea and Vietnam. By the 1990's, however, the trend had reversed itself. During Desert Storm, more than 75,000 Army and Air Guardsmen were deployed. The use of the Guard for military missions, even absent a major war, was set in 1991 and continues to this day. With a standing army of about 500,000 men and women, simultaneous operations in such diverse places as Iraq, Afghanistan, Kosovo, Bosnia and Haiti have made use of the National Guard and other reserve units essential. Through this latter period, it must be emphasized that the Guard's domestic security role also continued, and it remains the primary source of such aid to civil authorities to this day. In essence, a discussion focusing on military support to civil authorities is really a discussion about National Guard support to civil authorities.

²³ General Accounting Office, *Homeland Defense: DOD Needs to Assess the Structure of U.S. Forces for Domestic Military Missions*, 9.

V. THE SIGNIFICANCE OF MILITARY AID

A HOW THE U.S. SYSTEM FUNCTIONS

Establishing the fact that the National Guard is a major resource during critical incidents is a relatively easy and straightforward process. It can be determined by a simple exercise that documents historic and current use. The more complex question is just how important is that support? What is it that communities depend upon the Guard to provide that is so essential and that can't be obtained through some other source? To answer this question, one must first understand how the United States is organized for and handles major disasters.

The United States employs a unique, three-tier system of government—federal, state and local. Sometimes operating in collaboration, occasionally overlapping, these individual tiers generally work independently from one another by assuming primary responsibility for various kinds of services. This model presents both opportunities and challenges.

Local jurisdictions assume most of the responsibility for maintaining public order within their area of operation, which includes maintaining sufficient emergency response capabilities to handle most kinds of incidents. The benefit of this model is that it provides an opportunity for communities to tailor such services to their individual needs and priorities. Sometimes, though, an event occurs that is so large, or so devastating, or has such a massive casualty and/or damage potential that it quickly exhausts the individual jurisdiction's resources. The challenge of the system then becomes finding a means to rush additional assistance to the location in a timely manner.

When an event threatens to overcome the resources of the individual jurisdiction, it can appeal to adjacent or nearby agencies for help but eventually, if the event is large enough in scale, the request lands on state government. Virtually all states have developed mutual aid systems for the various components of their emergency services, and virtually all are voluntary—other local jurisdictions can agree or refuse to assist.

If a state is loathe to commit other regular first responder agencies, or unable to do so, it has few options. A governor can activate his/her own Guard units, and quite often that is exactly what happens. It can also appeal to the federal government for assistance. Such requests generally follow a cumbersome path before actual resources are deployed.

These two options—activating Guard units under state authority or requesting assistance from the federal government—can be done independently or simultaneously. Both options have benefits and deficiencies.

Activating Guard units under state authority is a relatively fast procedure, but limits response to in-state resources, and the costs are ultimately absorbed by the state. Requesting resources from the federal government can take all or some of the financial burden off the state, but it usually takes much longer to acquire approval and receive assistance. That leaves a third or combination course.

In this latter example, a state may initially activate some Guard units while also requesting aid from the federal government. This approach may result in some shared costs and access to greater resources.

Regardless of the route employed, military forces often represent the largest response group. The reasons for this are fairly simple to grasp:

Manpower—No state or federal agency has manpower in quantities anywhere near that of the armed forces. Military resources are spread throughout the country—particularly Guard units—and generally more prepared to respond. States can call upon local jurisdictions to assist through a mutual aid agreement, but such agreements are voluntary, placing the state in a precarious position. Although federal assistance is also technically not a given, National Guard use by the states is, assuming the units are not already activated for other missions under federal authority—an assumption that may prove dangerous in the future.

Equipment—A reason similar to the manpower issue is one of available equipment. The Department of Defense controls vast transportation resources including vehicles, cargo planes and ships. It can throw massive quantities of material at a problem faster than anyone else can.

Training—In most disasters, the resource needs are similar if not identical. They usually include, as pointed out earlier, people trained in field medical services, security, heavy equipment operation and so forth. With the possible exception of medical assistance, no other agency has individuals trained in these specific areas of expertise; at least not in the quantities available to the military.

In addition, various Guard units have some very specialized training that can and often is of great help. This includes Air Guard helicopters and pilots that can aid in searches, assist in security operations and carry water to help fight wildland fires. Also in this category are the Civil Support Teams (CST's)—twenty-two member, full-time teams trained to assist in weapons of mass destruction incidents.

Funding—the Department of Defense has the largest budget of any agency in the federal government. It can be argued, although the department might refute this, that it can absorb the costs associated with using its resources during a critical incident much more easily than other federal agencies can. Of course, this issue only becomes relevant when federal resources are provided.

All of these reasons make a strong argument for use of the military when massive resource needs exist. Certainly some other alternatives may be considered, but none match the military in terms of sheer size and—at least historically—availability.

Just how important is this aid to local communities? That becomes the next key question.

B. IMPORTANCE OF MILITARY ASSISTANCE

A review of the historical use of the military—again primarily the National Guard—to assist civil authorities during major emergencies can reveal much about the

relative importance of this resource. An even clearer understanding of the critical value of military assistance becomes evident when the “customers” of that support are interviewed—emergency managers.

As a group, emergency managers are generally responsible for coordinating the initial response to and at least part of the recovery from a major incident. Much of the success, or failure, of their efforts rests on pre-event planning. Anticipating and appropriately preparing for various kinds of events ultimately plays a crucial role in how well response and recovery efforts go. This must, out of necessity, include planning for how, when and from where additional resources can be quickly obtained. This knowledge, in turn, provides a working platform from which key deficiencies can be addressed.

The kinds and extent of preparation can vary from one area to another and from one kind of event to another. Some fairly universal examples of pre-event planning include such activities as pre-positioning resources, identifying evacuation routes and emergency shelters, providing training and exercises, and acquiring critical equipment. More on point for this research is the part of pre-event planning that includes consideration of outside assistance.

All states have some form of mutual aid plans for their primary emergency response disciplines. As of the writing of this paper, forty-eight states have signed the Emergency Management Assistance Compact (EMAC) supported by the National Emergency Managers Association (NEMA) and California is on the verge of signing, leaving only Hawaii out of the pact.

This agreement provides a platform from which states can request and receive assistance from other states. A recent example of how this works is the mutual aid response to Hurricane Ivan. According to a NEMA press release, Florida had requested and received aid from nine other states, Alabama received assistance from five states and, as of the date of the press release, West Virginia’s request for personnel and heavy equipment was being acted upon. Even with this compact, and the potential access to

millions of emergency responders throughout the country, the National Guard is continuing to play a pivotal role in pre-event planning as well as incident response and recovery operations.²⁴

Tracy Hein, Emergency Services Manager for the Office of Emergency Services in Contra Costa County, was one of several individuals interviewed for this paper. She acknowledged that California's event planning tree often depends upon rapid support response from state and federal authorities. In her experience, the National Guard has provided the vast majority of that response. She described critical assistance provided by the Guard in the past for riots, critical infrastructure protection and during numerous natural disasters including fires, floods and earthquakes.²⁵

In all of the interviews conducted for this paper, it was evident that relief was a built-in component of most response and recovery plans, and that the Guard was considered one of two major resource origins, the other being mutual aid compacts for law enforcement and fire agencies.

David Longshore, an emergency services manager for the city of New York, agreed that National Guard support is a critical component of both planning and actual response phases. He also provided first-hand experience of the Guard's importance by describing all of the support received by the city following the 9/11 attacks.

Some of the more critical roles played by the Guard included logistical support, combat air patrols—which provided a much-needed psychological lift for the city's residents—planning and scene management expertise and security work. The latter was an extremely important factor because guardsmen replaced city police officers performing routine security and traffic duties, allowing the police department to concentrate its resources on rescue and recovery operations.²⁶

²⁴“EMAC resources deployed to Florida, Alabama in Response to Hurricane Ivan: Missions Ongoing for Charley, Frances,” National Emergency Managers’ Association, <http://www.nemaweb.org> [Accessed December 1, 2004].

²⁵ Tracy Hein (Emergency Services Director, Contra Costa Office of Emergency Services) interview with author, Martinez, CA, November 15, 2004.

²⁶ David Longshore (Emergency Services Manager, New York Office of Emergency Management) interview with author, Monterey, CA, December 14, 2004.

Another individual interviewed was Michael Petrie, a former emergency services manager for the city and county of San Francisco, instructor at the Center for Homeland Defense and Security and member of DMAT Team 6.²⁷ Petrie confirmed the significance of guard support in his jurisdiction's planning process for incidents such as riots, earthquakes, fires and WMD events.²⁸

The single most important issue that surfaced during the interviews, however, did not focus on the importance of the Guard itself, but rather on the issue of planning for alternatives. Virtually no one seems to be considering the possibility of the Guard being either unable to or unwilling to respond, and no one could identify a viable alternative resource. When asked directly what they would do if Guard assistance were requested but not available, none of the managers were able to provide a satisfactory answer.

All agreed that, at least in the case of a major incident with substantial casualty and damage levels, a lack of assistance from the Guard would seriously impair mitigation efforts. As Petrie pointed out, emergency responders are quickly exhausted following a major event. They are often required to work twelve hours on and twelve hours off for the duration of the event, which can last several days if not weeks. Without relief, he believes emergency responders' capabilities will erode quickly, impacting performance.

This lack of planning for alternatives is not exclusively a state or local phenomenon. Dr. C. J. LaCivita, Executive Director of the Defense Resource Management Institute, Monterey, candidly expressed doubt that anyone within the federal government in general and the Department of Defense in particular had identified the issues involved or taken a systematic approach to viewing the concerns raised by this research. He also believes that the current dual role of the Guard is taking a toll on Guard resources. He projects both demands will continue for some time, and that this may lead to some serious problems in the near future.²⁹

²⁷ Disaster Medical Assistance Teams have been established throughout the United States by the federal government.

²⁸ Michael Petrie (Emergency Services Manager, Office of Emergency Services, City and County of San Francisco) interview with author, Monterey, CA, December 8, 2004.

²⁹ C. J. LaCivita, PhD (Executive Director, Defense Resources Management Institute, Naval Postgraduate School) interview with author, Monterey, CA, October 17, 2004.

Perhaps the lack of concern among emergency managers is due to the existence of other viable alternatives, readily available to fill any gap left by a lack of response from the National Guard.

C. ALTERNATIVES

It would be patently unfair to downplay the role of non-military resources available during major incidents. Myriad local, state, federal and even private sources of support are often available. However, in major disasters, the support provided by the military is generally confined to two categories: special units (e.g. helicopter support, CST's) or massive support providing large contingents of personnel and/or equipment. These types of resources, therefore, will define the limits of a discussion of possible alternatives in this paper.

1. Air, Sea, Land Transportation

Smaller, contained incidents can likely find alternative ways to transport personnel and deliver equipment and supplies, but major events covering large areas may find it more difficult to replace military capabilities. In particular, air and water transport abilities clearly mark the military as unique. Even other countries depend among U.S. military assistance during major events. The most recent example of this is the destruction following the earthquake and resulting tsunami off the coast of Sumatra. Military transport capabilities have and, at the time this report was written, are still being used to ferry personnel and supplies to the hardest hit areas.

2. Heavy Equipment and Operators

There is an abundance of heavy equipment and operators throughout the United States, but it is owned by the private sector. To date, no plan or authority has been established for securing this resource for use during a disaster, or even for how to identify and transport it to the point of need. Response and recovery efforts are time sensitive. Delays in resource availability can be devastating. Only the military currently has control of both the equipment and operators and means to quickly move them to where they are needed.

3. Large Troop Deployment

This area has much room for developing alternatives, and efforts to do just that have begun. There are millions of first responders in the United States. Many are better

trained and much more experienced than their Guard counterparts in several critical areas. Examples that immediately come to mind are police and fire fighters that are periodically called upon to aid other jurisdictions through local or state mutual aid agreements. The development of the Emergency Mutual Aid Compact mentioned earlier represents an effort to provide regional or even national support during critical incidents. However, also mentioned already is the fact that these agreements are all voluntary.

Individual agencies are free to respond or not as they choose and, while deployed, although nominally under the command of the requesting agency, they still operate as independent units that can control what they will or will not do, and are free to leave when they choose to. This is a remarkable resource, but not one that is highly dependable. An argument can be made, though; a future decline in Guard dependability would increase the value of this collective resource. Security and fire assistance aside, other kinds of deployment are not as readily apparent. This is certainly true for medical and rescue assistance.

Like police and fire agencies, there are numerous medical personnel that could be called upon to assist immediately following a major disaster. However, like heavy equipment and operators, there is little in the way of an organized plan or authority established to rush resources to the scene of a major disaster. The most notable exception to this is development of Disaster Medical Assistance Teams (DMAT's) that are comprised of volunteers formed into small units that have medical supplies already stored and ready for transport. These teams are equipped to operate without relief for seventy-two hours. According to Michael Petrie, they are then supposed to be re-supplied by trains pre-positioned and loaded with medical supplies. As critical as this resource can be, it has too distinct limitations.³⁰

First, like the other mutual aid plans discussed, these teams are comprised of volunteers that can decline to respond. How likely is it that a significant portion of the volunteers would decline? Petrie candidly admits that would depend upon the event and

³⁰ Michael Petrie (Emergency Services Manager, Office of Emergency Services, City and County of San Francisco) interview with author, Monterey, CA, December 4, 2004.

location. For example, a major event in the San Francisco Bay Area could easily cause a conflict of duties for Petrie and several team members that provide emergency services for their own jurisdiction.

A second limitation to these groups is that they have no surgery capabilities. This severely limits their usefulness. Military field hospitals, in comparison, are staffed by medical personnel who are not given an individual choice whether to respond or not or what kinds of duties they will perform. Such units are also equipped to provide surgical care as well. As important as DMAT's can be, they simply cannot replace full military medical units.

Another resource mentioned was specialized units. These include expertise like that provided by the National Guard Civil Support Teams. Arguably, there are several alternatives for at least some fields of expertise. The Federal Emergency Management Administration has several individuals that are prepared to respond following a major incident to provide critical expertise. The Centers for Disease Control have specially trained and equipped teams that can assist during major health incidents such as biological events. Federal teams are available to respond to nuclear accidents. The list goes on.

This area represents perhaps the greatest availability for non-military response, but it should be noted that all of the types of expertise mentioned represent federal resources. States do not enjoy a similar set of options short of requesting federal aid, and none of the alternate resources have the capabilities of the military in terms of sheer quantities and ability to respond. In other words, there really are no viable options to military support during catastrophic event.

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VI. WILL MILITARY ASSISTANCE BE AVAILABLE?

The historical importance of the military for ensuring homeland security and mitigating the damage caused by major disasters is well documented, as is its currently assigned roles. The continuing dependence upon this assistance among emergency managers is also fairly well established. The remaining question, therefore, is how available is that assistance likely to be in the future? Will it be as readily available as it has been, or are there new factors developing that may reduce or eliminate it altogether?

If the National Guard in particular remains as available as it has always been, there is little need to consider other options. Under this model, we are collectively doing what we need to do to prepare for various disasters including major terrorist attacks. What if the Guard is not available though? What if no contingency for such a scenario has been allowed for, a major incident causes devastating and widespread casualties or damages, local responders are quickly overwhelmed and the cavalry doesn't arrive?

Military assistance is such an integral part of our collective response and recovery planning efforts that its absence would be impossible to readily overcome. If it is in jeopardy, therefore, some kind of systematic identification and development of alternative resources must be considered. These issues bring us back to the ultimate question—what is the likelihood that future military assistance, particularly assistance from the National Guard, may be reduced or eliminated?

Deriving the answer to that question is difficult in the extreme, at least with any degree of empirical accuracy. It is based on so many variables, inextricably locked together in such a complex pattern that some degree of subjective interpretation and subsequent assumptions is almost inevitable. Adding further difficulty is the fact that the military itself has been reluctant to admit it has limitations, and much of the data needed to conduct a valid, scientific analysis is not made available to independent researchers. However, there is considerable anecdotal evidence to support some degree of doubt, and recent statements by key military personnel strengthen that concern.

A. EMERGENCE OF COMPETING DEMANDS

It has always been recognized that the Guard has both security and defense roles, but high mission demand in one area has historically been accompanied by relatively low demand in the other. This is no longer the case. Since 9/11, there has been an equally high demand on the Guard in both areas. This is unique in the Guard's history, and is stretching its capabilities. This problem is likely to continue for the foreseeable future.

Colonel Wayne Wojda, National Guard Bureau Liaison Officer with the Defense Resources Management Institute (DRMI), Monterey, conceded that the high levels in both defense and security demands was historically unusual and likely to continue for at least the next decade.³¹

Assistant Secretary of Defense Paul McHale made a similar observation during his March 3, 2003 statement to the House Armed Services Committee, stating that:

In the past, the National Guard was dual-tasked. In wartime, the nation has expected the Guard to go fulfill its mission overseas; in peacetime, the nation has expected the Guard to be available for domestic emergencies. The terrorist attacks of September the 11th, have now taught us that the National Guard may be called upon to do both at the same time, not by accident but because our nation's enemies may attack us in both places at once.³²

McHale's statement addresses terrorist acts only. When the need for support during other kinds of disasters is factored in, it is very obvious that the Guard is being pulled in two directions to a much greater magnitude than ever before.

In interviews with other Guard officials, a general consensus was noted that supports viewing current demand levels as highly unusual and potentially very problematic. This view of impending problems goes all the way to the top of Guard and reserve commands. According to the Los Angeles Times, Lieutenant General James Helmly, commander of the Reserves, has expressed personal concerns regarding the

³¹ Colonel Wayne Wojda (National Guard Bureau Liaison Officer, Defense Resources Management Institute) interview with author, Monterey, CA, October 27, 2004.

³² McHale, "Address to the 108th Congress— Subcommittee on Terrorism, Unconventional Threats and Capabilities, Committee on Armed Services."

status of the Reserve force to Army Chief of Staff General Peter J. Schoomaker. Helmsly reportedly advised Schoomaker that demands of the wars in Afghanistan and Iraq have placed the Reserves “in grave danger of being unable to meet other operational requirements.” Helmsly bluntly told the Pentagon that the reserves are “rapidly degenerating into a ‘broken’ force.”³³

National Guard Commander Lieutenant General H. Steven Blum recently expressed similar concerns. In a New York Times’ article, Blum is quoted as saying he needed an additional \$ 20 billion to replace Guard equipment destroyed or left for replacement units in Iraq or Afghanistan in order to ensure Guard units “will have enough equipment to deal with emergencies at home.”³⁴

More recently, problems experienced during response and recovery operations following Hurricane Katrina pointed to severe shortages in critical equipment among Guard units, prompting Blum to admit to a severe problem. He is quoted in one article as acknowledging trucks, bulldozers and communications equipment “all were in short supply for Katrina.”³⁵

The concerns being expressed by Guard and Reserve officials, including the respective commanders of these forces, combined with McHale’s statement and substantial anecdotal evidence clearly suggest that these military units are being compelled to maintain high mission demands in both homeland defense and homeland security roles. This dual personality is beginning to have severe, negative impacts. Some of the more obvious ones, discussed in the next section, include recruiting, training, combat readiness and equipment problems.

B. CUMULATIVE IMPACT OF HIGH DEMANDS

Just how does the high level of both defense and security mission demand impact the Guard? One very good source of information on this question is the U.S.

³³Mark Mazzetti, “Military Official Says Army Reserve Close to Broken,” *Contra Costa Times*, January 6, 2005, A11.

³⁴Eric Schmitt, “Recruiting Numbers Fall Sharply for Guard,” *Contra Costa Times*, December 17, 2004, A31.

³⁵Mark Sappenfield, “For Guard, Equipment Falls Short,” *Christian Science Monitor*, <http://ebird.afis.mil/ebfiles/e20050927393763.html> [Accessed September 27, 2005].

government's General Accounting Office (GAO). In its July 2003 report on homeland defense several key concerns with current and projected Guard responsibilities in areas such as personnel tempo, training and combat readiness were identified.³⁶

1. Personnel Tempo

The report defines personnel tempo as "the amount of time that a member of the armed forces is engaged in their official duties that makes it infeasible to spend off duty time at the member's home, home port (for Navy servicemembers), or in the member's civilian residence". The report noted that the tempo has been and continues to be high for National Guard personnel (p.18). This relatively high tempo has some practical impacts.

Increased duty assignments create morale issues within Guard units that affects how many individual members elect to stay when their current contract expires. Guard officials interviewed admitted that they fear massive retention problems as units return from Iraq. They also admit that public knowledge of just how much time Guard personnel are spending overseas is hurting recruitment that is now lagging a dramatic 30% behind goals for the first time in several years. That decline may be exacerbated even more as individual members of Guard units returning from extended tours overseas refuse to extend or renew their contracts.

Another major source of personnel for the Guard is regular force members that have traditionally elected to maintain a relationship with the military even after their regular duty enlistment is completed. These individuals have accounted for a significant portion of new Guard and reserve sing-ups. National Guard command officer Lieutenant General H. Steven Blum, recently stated that this group accounted for "about half" of its recruitment.³⁷

2. Training Deficiencies

The GAO report noted that servicemen are not maintaining sufficient training levels because they are missing key instruction while engaged in domestic missions (p. 14). Guard officers interviewed also verified this fact. In many cases, even the nature of

³⁶General Accounting Office, *Homeland Defense: DOD Needs to Assess the Structure of U.S. Forces for Domestic Military Missions*.

³⁷Schmitt, "Recruiting Numbers Fall Sharply for Guard."

the domestic missions assigned has conflicted with efforts to maintain essential skills because the assignments have not reflected duties associated with the individual's normal mission.

The report notes, for example, that approximately 8,000 National Guardsmen from 100 different units were assigned security duties at domestic Air Force bases immediately following the 9/11 attacks, but that only one of these units had training in their primary mission duties (p. 15).

3. Reduced Combat Readiness

The third immediate concern in the report was maintaining combat readiness. The report outlines incidents where security missions were effectively reducing combat readiness because guardsmen were either unable to complete training because of security missions or the missions themselves were providing experience counter to combat requirements.

In the eyes of the Department of Defense, the dual responsibilities of the Guard are not of equal value. In at least one source, the department clearly states that "defense of the U.S. Homeland against external threats and foreign aggression" is their primary responsibility.³⁸

The department is certainly aware of the fact that domestic missions may be seriously impairing the combat readiness of Guard units that are being depended upon more and more to fill gaps in active duty forces. If nothing happens to either change current conditions or the department's priorities, it seems reasonable to assume Guard units will begin being "saved" for higher priority missions in support of homeland defense.

4. Equipment Burnout

An area that was not covered in the GAO report, but that nevertheless raises great concern, is the issue of equipment burnout. Military planners develop future equipment maintenance and replacement needs on the basis of anticipated levels and kinds of use. This is true for Guard units as well, which are often not well equipped to begin with. Air

³⁸ Department of Defense. *Department of Defense Homeland Security Joint Operating Concept (GO/FO Draft, 12.*

National Guard combat planes, for example, have recorded significant flight hours since 9/11 for combat air patrols over domestic cities that have substantially surpassed their planned use levels, increasing maintenance costs and shortening the planned life-span of several planes. This high demand on equipment is straining Guard budgets that are already low on the Department of Defense's list of priorities, and is leaving units dangerously low on critical equipment needed during homeland security operations.

In addition to comments quoted earlier by National Guard bureau chief Lt. General H. Steven Blum, U.S. Comptroller General David M. Walker has been reported to say that Guard officials have admitted that response to Hurricane Katrina was impeded by a lack of critical equipment including "satellite communications equipment, radios, trucks, helicopters and night vision goggles..."³⁹

The department's budget is beginning to flatten out following some significant increases in the past few years. It is likely that, except for overseas operations funding, the department's budget will either level off or decrease for the next few years. This is a view shared by others, including Dr. LaCivita.⁴⁰ Since there is no evidence suggesting the Guard's position on the priority list will improve, it is likely that Guard equipment will continue to age faster than anticipated. Already strained budgets will not be able to fund accelerated maintenance schedules, and additional monies for acquiring replacement equipment sooner than anticipated will simply not be forthcoming. The overall impact of these trends will be a Guard force that continues to be under-equipped. This can be critically important to localities in need of air and heavy equipment resources in particular.

C. CONCLUSIONS

At this point, it is clear that several statements can be made with a reasonable degree of comfort. First and foremost, the military has historically played a major role in homeland security, and the responsibility for it continuing in that role is established in

³⁹ Drew Brown, "Wars Leave National Guard Short on Critical Equipment," *Miami Herald.*, <http://ebird.afis.mil/ebfiles/e20051021397626.html>, [Accessed October 21, 2005].

⁴⁰ C.J. LaCivita, PhD (Executive Director, Defense Resources Management Institute, Naval Postgraduate School) interview with author, Monterey, CA, October 17, 2004.

various documents including the National Strategy for Homeland Security and the Department of Defense Homeland Security Joint Operating Concept.

It is equally clear that the role of the Guard in active, overseas campaigns has increased significantly, and that increase is likely to represent a long-term trend. In his letter to the Pentagon, General Helmsly pointed out that approximately 40% of U.S. troops currently serving in Iraq are Reserve or National Guard forces, and he predicts this number will increase as unit rotations occur.⁴¹

This high mission demand in both areas of responsibility is beginning to have an adverse impact on the Guard, and the severity of that impact is increasing at an alarming rate. For the first time in many years, recruitment efforts have failed to meet goals. Specialty training and maintaining combat readiness are difficult-to-impossible, equipment is deteriorating much faster than budgets can absorb, and states are complaining Guard units are stretched too thin.

As originally reported in a New York Times article, during a 2004 governors' conference in Seattle, the governors held a meeting with Pentagon officials to complain about "the largest call-up of the National Guard since World War II."⁴² According to this same article, governors complained of call-ups as high as 62% in some states. What many of the governors found particularly troubling was that these call-ups included Guard fire fighting units right when the fire season was beginning. The call-ups also impact how much equipment is available for fighting fires as well. According to one source, for example, California depends upon nine Blackhawk helicopters maintained by the Guard for fighting wild land fires, but all nine were scheduled for duty in Iraq beginning in September 2004.⁴³

The absence of firefighters is not the only personnel problem. A recent call to the California National Guard confirmed that virtually all of the military police, transportation or engineer units normally headquartered in the San Francisco Bay area

⁴¹ Mazzetti, *Military Official Says Army Reserve Close to Broken*, A1.

⁴² Sarah Kershaw, "Governors Say War Leaves Them Shorthanded," *Contra Costa Times*, July 20, 2004, A18.

⁴³ "Guard Spread Too Thin," *Contra Costa Times*, July 22, 2004, A14, n.a.

were currently on active duty assignments outside the state. It was also confirmed that few of these kinds of units—the ones most typically needed during major disasters—were available anywhere in California. In some cases, the unit's equipment was left in place because the called up force inherited equipment left behind by the unit being replaced. Unfortunately, there are few Guardsmen left that are trained to operate any of it.

Another area of rising concern is the double impact on local emergency response agencies. Although no official numbers are available, it is fairly common to find that a significant percentage of Guardsmen hold emergency responder positions in their community. Consequently, states are not only losing the military resources they depend upon, but a substantial number of emergency personnel as well.

The final answer to the question, given all of these indicators, is that military support to civil authorities may be unavailable or at least diminished in the near future. The word “may” is cautiously inserted because accurately predicting all of the variables affecting the military’s role is virtually impossible.

Congress could somehow find the funds needed to increase active duty ranks sufficiently to end current Guard activation levels. The wars in Iraq and Afghanistan, and military needs in places like Kosovo and Haiti could miraculously end and no new trouble spots emerge. The Pentagon could suddenly find all of the funds needed to resupply and properly outfit Guard units. States and the federal government could cooperatively create and fund homeland security resources outside the military chain.

Many things are possible, but given current fiscal problems and global realities, none of these possibilities even comes close to the level of being a probability. Actual availability will most likely level off somewhere between no availability and historical availability.

It is unlikely, for instance, that a terrorist attack the size and magnitude of the 9/11 incidents would not evoke a major military response regardless of how thin it is stretched. Certainly key units, like the National Guard’s Civil Support Teams, will be available for the foreseeable future, and some other federal assets will continue to be available as well. What does seem to be evident, though, is that massive military

manpower and equipment deployment following a major incident will not be as readily available, especially if the incident has no national significance. Unfortunately, the vast majority of critical incidents fall into this category.

The United States has suffered three WMD attacks within its borders in the last decade. Although none were labeled as such at the time, attacks on the Alfred P. Murrah federal building in Oklahoma, and both the Pentagon and World Trade Center attacks of 9/11 would today qualify as WMD events. Last year alone, there were more major hurricane events than that in the Southeast, California suffered the worst firestorms in its history, west and mid-west states experienced major flooding and myriad other events caused major disruption to communities throughout the country. It is for these kinds of events that states and local jurisdictions may have to find alternate resources.

If there is even a possibility that military support to civil authority has been or will be diminished, why are emergency planners not addressing the possibility? Why are states not demanding federal assistance in developing dedicated, homeland security resources?

These kinds of questions are of paramount importance, but the answers are doomed to be subjectively worded, because there is no one cause. The reasons are different for different people in different jurisdictions at different government levels and in different professions. Even the impact of a reduction in military support will vary depending upon the jurisdiction and type of incident. It is possible, however, to get at least some idea of the impact by examining an individual incident model.

In the following section, a worst-case scenario is presented based on an identified region and events. While the hundreds of variables that would come into play in an actual incident could significantly change the outcomes, those listed in the scenario are well within the realm of the possible.

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VII. UNDERSTANDING POSSIBLE IMPACTS THROUGH DEVELOPMENT OF A SCENARIO

Response and recovery efforts following a major disaster work much like a large, intricate mosaic. The complex activities of the various responders must work in a coordinated, time-sensitive manner to achieve the best results. If pieces are missing or delayed the finished product is flawed. Needed resources that fail to be delivered on-scene in a timely manner can quickly turn rescue efforts into recovery operations.

The National Guard represents a critical component of the overall response and recovery mosaic. Their historic assistance to civil authority is well documented and outlined in this paper. They remain, to this day, the chief military resource available to communities during incidents that overwhelm local jurisdictions.

If the Guard cannot provide anticipated levels of support when needed, or their response is delayed, the affects can be devastating, especially if alternate resources have not been identified in advance.

To illustrate what can happen when a key resource like the Guard is not available and replacements have not been identified, a scenario was carefully developed. Based on known dangers and real geographical, environmental and resource factors, each element was created with the assistance of one or more subject matter experts.

A. SUBJECT MATTER EXPERTS

Scenario development depended heavily upon the input of the following individuals:

Deputy Chief Chris Suter, San Ramon Valley Fire Protection District.

Chief Suter is a twenty-five year veteran of the fire services. In addition to his general expertise, he is considered an expert in emergency communications systems. Chief Suter is a member of the regional homeland security advisory committee, and serves on the committee established to create a regional emergency communications network. San Ramon Valley Fire Protection District is experienced in both wild land and

structure fires. It has responsibility for a major portion of the Oakland Hills and a large part of the Mt. Diablo foothills as well as several densely populated areas.

Colonel Steven Smith (retired), POMSO Officer, SCANG

Colonel Smith was the former South Carolina Army National Guard officer in charge of maintaining operational orders. He is knowledgeable about military planning for operations providing assistance to civil authorities, and has first-hand experience in the affects on the Guard of its dual roles following 9/11.

Senior Emergency Planner Chris Boyer, Contra Costa Office of Emergency Services

Mr. Boyer is a recognized expert in search and rescue operations and a key planner for regional responses to major events. Mr. Boyer serves as regional liaison to various agencies including the California National Guard. He is involved in on-going plans to review area dams and reservoirs to determine their ability to withstand a major earthquake, and in pre-planning emergency responses for dam failures as well as other natural and man made disasters.

Commander Scott Daly, Contra Costa Office of the Sheriff

Commander Daly is in charge of field operations for the Office of the Sheriff; one of the largest police agencies in California. His duties include planning for police response to major incidents and working closely with other agencies to develop joint operation policies and procedures. Commander Daly was also instrumental in creating the department's helicopter unit.

Supervisor Sandra Bradley, American Medical Response (AMR).

Ms. Bradley is the supervisor of Clinical Education Services for AMR, the largest ambulance company in the United States and long-term provider for both emergency and basic medical transport services in the region. Ms. Bradley is also a paramedic and member of DMAT 6, the Bay Area team.

Colonel Terry Edinboro, Chief of MSCA, CA ANG

Colonel Edinboro is the chief of the Military Support to Civil Authority Department at the Joint Operations Command Headquarters, Sacramento, California. He is responsible for both intelligence (J2) and operations (J3) programs. Among other duties, Colonel Edinboro oversees the Operations Centers that monitors incidents throughout the state and deploys both National Guard and Air Guard resources.

Communications Systems Manager Terry Betts, Contra Costa Office of the Sheriff

Mr. Betts oversees the various telecommunications systems employed by the Office of the Sheriff, including radio, telephone and cell phone devices. He also serves as the Sheriff's representative on various regional and statewide committees, and acts as liaison to other public safety agencies throughout Alameda and Contra Costa counties. He is currently working with other telecommunications experts to develop a regional public safety radio communications network.

B. BASIC PREMISES

A scenario is a hypothetical set of circumstances that allow an analysis of the possible impact of certain variables introduced into the scene. To serve as a legitimate analytical tool the scene must be realistic. It must be based upon an event or series of events that are at least possible, and presented in a way that reflects how such an event(s) would most likely unfold in "real life." The closer the scenario can come to either historical events or ones that are highly probable, the more value can be gleaned from a review of the outcomes presented.

In developing this particular case, extreme care was taken to ensure the incident represents a realistic danger, and the outcomes envisioned are plausible given the factors imposed. The location is real and the geographical factors presented are accurate.

The individual events were selected by reviewing historical incidents. They were then placed within the context of the scenario in a manner that parallels the actual event to the extent possible. Where an historic incident was changed, or a hypothetical one

included, the changes represent ones that are highly possible and of great concern to local authorities, and the hypothetical event represents one with a high probability of occurrence.

1. Location

The setting for the scenario is the San Francisco Bay Area. The focus is on Alameda and Contra Costa counties that lie along the eastern edge of the Bay. The population of the focus area is approximately 2.5 million.

Contra Costa and Alameda are adjacent counties with Alameda bordering Contra Costa's southern boundary. The counties comprise a single region broken into three distinct geographical areas.

The western portion is a narrow, densely populated corridor bordered on the west and north by water, and on the east by a group of hills that will collectively be labeled the Oakland Hills for this scenario. On the south, Alameda County borders Santa Clara County. This area contains several key cities including Oakland, Berkeley and Richmond.

The central portion is comprised of a series of connecting valleys. It is bordered on the north by water, on the west by the Oakland Hills and on the east by Mt. Diablo and its foothills. The area contains several major financial and business centers including Concord, Walnut Creek and Pleasanton. It is also the home of Lawrence Livermore and Sandia National Laboratories.

Mt. Diablo and its foothills on the west divide Eastern Contra Costa from the central area. It is bordered by water on the north and east, including the Delta area. To the south, an eastern extension of the Mt. Diablo foothills separates the area from central Alameda.

2. Transportation Systems

Six major bridges connect this area to the North Bay and San Francisco Peninsula. There are also a number of smaller bridges across the Delta area, connecting East Contra Costa to San Joaquin and Sacramento counties.

Several major highways cross the region including Interstate 80 and Highways 680, 580, 4 and 24. Highways 4, 24 and 580 provide the major points of connection between central and western portions of the region. All three highways pass through the Oakland Hills.

There are three international airports and several smaller ones in the Bay Area. Oakland International Airport and four smaller fields—Hayward, Livermore, Buchanan and Byron—directly serve the Contra Costa-Alameda region.

Several major rail lines also cross the region. These lines generally run along the eastern shore of the Bay, curving through the north end of the Oakland Hills. Two major rail corridors split at this point with one crossing the Sacramento River to Solano County and the other heading east through central and eastern Contra Costa, eventually crossing the Delta through a number of raised track sections and bridges.

3. Weather Conditions

Weather will play an important role in the development of the scenario. To create a realistic setting, historic conditions were identified and used. The incident takes place in early October. The selected weather pattern is based on data provided by Chris Suter⁴⁴ and Chris Boyer.⁴⁵

The high temperatures are in the mid-eighties with a relative humidity of 16 and dry winds from the northeast at 15-20 mph with gusts in the hills to 30mph.

C. CORE EVENTS

The scenario is based upon three events that combine to form a catastrophic incident.

1. A Major Earthquake along the Entire Hayward Fault

The United States Geological Survey (USGS) forecasts a 62% chance of a major earthquake in the San Francisco Bay Area within the next twenty-seven years.⁴⁶ One of

⁴⁴ Chris Suter (Assistant Chief, San Ramon Valley Fire) interview with author, Danville, CA, May 4, 2005.

⁴⁵ Chris Boyer (Emergency Services Manager, Contra Costa Office of Emergency Services) interview with author, Martinez, CA, April 21, 2005.

⁴⁶ USGS, <http://quake.wr.usgs.gov/> [Accessed April 23, 2005].

the most active faults in the area is the Hayward fault. The USGS predicts that a quake on this fault is certain, although they cannot predict when it will occur.⁴⁷

The Association of Bay Area Governments (ABAG), a regional planning agency, has developed damage estimates for an earthquake on this fault. These estimates, based upon an earthquake with a magnitude of 6.9 on the Richter scale, will be used to extrapolate damage resulting from one of the magnitude used for the scenario.⁴⁸

2. Terrorists Attack a 10" Steel, High-Pressure Gasoline Pipeline

The pipeline depicted is an existing high-pressure line running through Contra Costa County that alternately transports gasoline and aviation fuel. This same pipeline ruptured on November 9, 2004, killing five and setting fire to several buildings. In this event, a small terrorist group that has focused on the pipeline as one of several possible targets in the area decides that the earthquake has created massive disruptions, particularly in emergency response resources. They decide that an attack on the pipeline would further disrupt response and recovery efforts. The location selected is the Union Pacific Railroad service yard at the western edge of Martinez, the county seat and northern-most city in central Contra Costa. The yard is located on a narrow piece of flat land between the northern slope of the Oakland Hills and the Sacramento River. The pipeline runs through portions of the yard, adjacent to railroad tracks and at the foot of the hills. It is readily accessible at several points.

At the time of the earthquake, it is carrying gasoline being pumped through at the rate of thousands of gallons per minute. The closest cut-off valve is located at the eastern edge of Martinez in the area of the Shell Refinery. The destruction of this pipeline, either through accident or intentional act, is a cause of concern for authorities. Chris Boyer comments that the pipeline represents a known danger, and that its destruction could cause serious consequence.⁴⁹

⁴⁷ USGS, <http://quake.usgs.gov/research/geology/paleoseis/index.html> [Accessed May 7, 2005].

⁴⁸ Association of Bay Area Governments, <http://www.abag.ca.gov/bayarea/eqmaps/eqmaps.html> [Accessed May 6, 2005].

⁴⁹ Chris Boyer (Emergency Services Manager, Contra Costa Office of Emergency Services) interview with author, Martinez, CA, April 25, 2005.

3. A Major Wild Land Fire in the Oakland Hills

The pipeline explosion will start a fire at the northern edge of the Oakland Hills. Prevailing winds and overall weather patterns will quickly push the flames toward the crown of the hills, and will also expand it both east and west along the slopes.

The fire will occur during the same time of year and under the same general weather conditions that prevailed during the 1991 Oakland Hills fire. That fire burned along the western slopes of the hills, through Oakland and Berkeley, destroying 2,500 buildings, killing 25 people and burning 1,600 acres.

D. MAJOR PREMISES

The setting for the incident includes several projected factors.

1. California National Guard Units Are Having a Difficult Time Maintaining Adequate Readiness Levels Due to a Combination of Factors

Constant deployment for both defense and security reasons have hurt the Guard's ability to maintain training schedules. Equipment is being used up faster than projected, increasing maintenance and repair costs well beyond budgets. Most critical of all, recruitment and retention efforts continue to fall short. For the second year in a row, both were down nearly 50%. As a result, a number of units have been deactivated, and staff reassigned to keep more critical units at full staffing.

California's inability to maintain acceptable readiness levels would usually have resulted in the reassignment of the deactivated units to other states, but the universal nature of the problems being faced by California has at least temporarily spared the state from permanently losing these units.

The key reason behind the lagging recruitment and retention efforts is considered to be the massive deployment of Guard units overseas. More than half of all California units have been deployed to one hot spot or another. Virtually every military police, engineer, transportation and air support unit is either deployed or scheduled for an overseas tour. At the time of the scenario incident, Guard strength has fallen from over eighteen thousand shortly after 9/11 to just under fourteen thousand. About 58% of that force is either deployed overseas or training out-of-state for deployment overseas. The

remaining Guardsmen number approximately 5,800. They are comprised primarily of administrative staff and new recruits either in the training process or waiting to begin training. Realistically, the California Guard can claim about 1,900 fully trained Guardsmen available for deployment.

2. Fire Officials Throughout the Western United States Have Expressed Concern Over Dangers the Approaching Fire Season Will Present

A major shift in historic weather patterns caused the Pacific Northwest to receive much less rain than usual. The Southwest, on the other hand, received heavier-than-normal rainfall. Both of these conditions have lead to warnings of increased fire danger.

In the Northwest, lower rain totals have left shrubs much dryer than usual, significantly raising the burn index. The index, used by fire officials to forecast fire potential, is based on a formula that takes into account several variables including fuel moisture levels, relative humidity and wind. In the Southwest, heavy rainfall has caused a huge growth in grass and shrubs, greatly increasing the amount of fuel available.⁵⁰

3. Fire Officials are Concerned Over a Lack of Adequate Air Support

Air support is used for three primary purposes during wild land fires: observation, water and retardant dumps, and personnel and equipment transport. Fixed wing craft can serve as observation platforms and can deliver large quantities of water or retardant if equipped properly, but personnel and equipment transport is primarily the province of helicopters. Certainly getting resources to an area can be achieved through the use of fixed wing craft, and firefighters can be dropped via parachute. It still remains for helicopters, however, to provide the bulk of air transport in and around a fire area.

Transporting personnel and equipment requires heavy lift capabilities that far exceed those of most civil aviation helicopters. The military remains the only major resource for helicopters with adequate lifting power to be used for these kinds of missions. Most air tankers are maintained by private companies operating under federal contracts.

⁵⁰ Chris Suter (Assistant Chief, San Ramon Valley Fire) interview with author, Danville, CA, May 4, 2005.

The contract fleet of air tankers maintained by the federal government has been grounded while investigations into several crashes continue. This leaves approximately 700 helicopters with tank capacities ranging to 325 gallons plus a small number of lighter fixed wing aircraft with 800-1200 gallon water tank capacities the only air support available through the federal services. This does not include military aircraft, but almost all available military craft that can be used for fire fighting are deployed overseas including the 129th Air Squadron stationed at Moffett Field. This unit has been crucial to Bay Area emergency response, providing air support for wild land fires and search and rescue operations.

Although there are a handful of state and locally maintained helicopters equipped to respond to wild land fires, the number is grossly inadequate. Fire officials estimate that a major fire, like the 1991 Oakland Hills firestorm, could easily require one hundred helicopters to provide adequate coverage. Getting that much air support to a Bay Area fire in a timely manner represents a major logistical problem.⁵¹

4. Mutual Aid Pacts Are Voluntary and Based Upon Several Variables that Make Projecting Available Assistance Impossible

California has a number of well-defined mutual aid agreements, but all are based upon voluntary compliance. Individual agencies are free to agree or decline to send requested aid. Although there is an excellent history of cooperation, there is an equally impressive list of agencies that have declined to assist because of conditions within their own jurisdictions.

Even the much-touted Emergency Management Assistance Compact (EMAC) administered by the National Emergency Management Association (NEMA), and subscribed to by every state, with the exception of California and Hawaii, is based upon voluntary cooperation.⁵²

Planning for effective response and recovery efforts without knowing what kinds and quantities of resources will be available, and when they will arrive, is difficult to say

⁵¹ Chris Suter (Assistant Chief, San Ramon Valley Fire) interview with author, Danville, CA, May 4, 2005.

⁵²EMAC, http://www.emacweb.org/EMAC/About_Emac/About_Emac.cfm [Accessed May 10, 2005].

the least. Local jurisdictions blindly count upon the state and, through the state, the federal government to provide whatever is needed. In an era of growing federal deficits, budget tightening at the state and local levels, and increasing demand for finite resources that dependency may prove disastrous.

E. PRE-EVENT INCIDENTS

1. September 29th-30th

A series of thunderstorms are blamed for several forest fires in southern and eastern Oregon, eastern Washington and western Idaho. Washington has sufficient emergency response capabilities to initially handle the fires, but Oregon and Idaho lack large resource pools. Both states request support through the Emergency Management Assistance Compact as well as aid from the federal government.

California agrees to send some of its small air tankers to southern Oregon, and fire agencies in the far north end of the state collectively provide additional assistance, but the state declines to commit major resources due to high fire danger conditions in both Northern and Southern California.

Arizona, Nevada and Utah have relatively small resource pools, but send what is available. The federal government dispatches all of the fire fighting helicopters stationed in the affected states plus a majority of those stationed in the surrounding region. It also dispatches several fire fighting crews.

2. October 1st

Most of the smaller fires are quickly controlled, but two major fires in Washington; three in Oregon and 2 in Idaho are still not contained. Fire officials predict 3-4 more days before they are likely to gain control.

3. October 1st—Southern California

Several suspicious fires occur in the Southern California counties of Santa Barbara, Ventura and Los Angeles. A total of five fires are reported in the Tehachapi and Coastal mountain ranges. Fearing a repeat of the devastation caused by wild land fires during 2004, regional resources are quickly deployed and a request for mutual aid is sent to the State Office of Emergency Services. Orange County responds, but none of the other major southern counties are willing to commit resources because of concerns for

their own areas. This includes neighboring counties of San Bernardino, Riverside and San Diego that suffered extensive damage during the 2004 fires.

To the north, only a few large population areas have sufficient resources to provide significant levels of aid. The San Francisco Bay Area—the largest of those population centers—is facing high fire danger as well. Consequently, most local agencies decline to provide aid. Contra Costa and Alameda decline to send assistance.

Arizona, Nevada and Utah have already committed to the fires in the Pacific Northwest. Federal authorities deploy most of the remaining helicopters in the region as well as several fire fighting teams. The entire western United States is virtually stripped of federal fire fighting resources. Although additional resources can be brought in from the eastern part of the country, doing so would take a significant amount of time and would strip East Coast resources.

California attempts to activate National Guard units within the state, but there are almost no air resources currently available. The only remaining Air Guard helicopter unit not deployed overseas is a squadron of Chinooks stationed in Modesto in Central California. These are immediately deployed south to provide vertical lift capabilities.

Also almost entirely deployed are military police, engineer and transportation units. There are approximately 300 Guard members trained in fighting wild land fires left in the state. These are immediately activated and ordered to Southern California.

4. October 2nd

One of the fires in Ventura County and one in Santa Barbara County are merging in an area of steep canyons that cannot be easily accessed by vehicles. The area is also very dangerous for ground crews, limiting response to aerial water and retardant drops by helicopters and the handful of small air tankers operated by the state.

An urgent request for vertical lift resources to carry personnel and equipment into the area goes mostly unanswered. This kind of resource is almost exclusively operated by the military. In the entire western region of the country—from Montana west—there are fewer than forty helicopters available through the Guard. With the exception of the

Chinooks from Modesto, the others have already been deployed to the Pacific Northwest. No regular military units are available.

By afternoon, the fires in southern Oregon and western Idaho are all at least 50% contained, but two of the Washington fires continue to spread. Federal and out-of-state crews are deployed from Oregon and Idaho to Washington, but travel time and needed rest will make them unavailable for at least twenty-four hours.

The Southern California fires continue to spread. Large-scale evacuations of the hills around Santa Barbara and the Thousand Oaks area in Ventura County are ordered. Remaining Guard units are activated to set up shelters when it becomes evident the extent of evacuations will overwhelm Red Cross resources. Unfortunately, the Guard has diminished shelter capabilities.⁵³

Local law enforcement agencies request aid for security and evacuation assistance. The last large National Guard military police unit in the state, the 49th Military Police Brigade, recently began an eighteen-month deployment, leaving no trained personnel left to assist. The state sends 3,000 Highway Patrol officers to assist. Northern California regions are not asked to participate in the mutual aid response.

Area hospitals are inundated with victims mostly suffering from minor injuries and smoke-related respiratory problems. Four of the state's Disaster Medical Assistance Teams (DMAT's) are activated and deployed around the fringes of the fires to provide medical relief. None of the teams is capable of performing major surgery, but each can provide immediate emergency care.⁵⁴

F. THE INCIDENT

1. October 3rd, 7:56 a.m.

Commute traffic is at a peak in the Bay Area when an earthquake measuring 8.2 on the Richter scale strikes along the entire length of the Hayward fault.

⁵³ Terry Edinboro (Chief of Operations—MSCA, Joint Operations Command, CA ANG) interview with author, Sacramento, CA. May 24, 2005

⁵⁴ DMAT Teams are comprised of volunteer medical personnel from local jurisdictions. There are eight teams in California that are prepared to respond within twelve hours. Each team is composed of thirty-five individuals. The teams are supplied with sufficient tents, food and medical supplies to last 72 hours.

The initial quake lasts 1 minute, four seconds. Within twenty-four hours, hundreds of after shocks are recorded including two that measure 6.4 and 6.9 respectively. The quake causes major damage that will take weeks to fully assess, but one significant event occurs in the Union Pacific service yard on the western edge of Martinez.

2. October 3rd, 8:45 a.m.

In the northern section of the city of Martinez, four men are living in a small rental near the police station. The four are members of a small group of al Qaeda sympathizers. They moved to Martinez following 9/11 after identifying Central Contra Costa as a prime target area for key infrastructure components. Over the past two years, they have examined numerous targets and have identified over a dozen that are readily accessible and easily disrupted by small explosive devices.

The group has examined each location, photographed and studied it, and developed plans on how best to destroy it or at least maximize damage. Several of their photo operations have been noticed and reported to police, but the group's members have managed to leave before police can arrive to investigate.⁵⁵

The group quickly recognizes the confusion and disruption caused by the earthquake as a prime opportunity to attack one of their pre-selected targets. They select the pipeline at the north end of town for their first strike. The pipeline is chosen for several reasons:

- It is close. It can be reached by bicycle in a few minutes. This is critical because many of the other sites the group has investigated would be difficult to reach because of road closures caused by the earthquake.
- It is accessible. The pipeline runs exposed in several places as it runs through a Union Pacific yard and borders on a regional park where bicyclists, joggers and hikers are a regular part of the landscape.
- There is absolutely no security. It is open to the public without protection of any kind.
- Chances for escape are excellent. The group can plant bombs and be well on the way back to their house before they detonate.

⁵⁵ There have been several reports of suspicious activities including individuals taking photographs of petrol-chemical plants, bridges and oil pipelines in Contra Costa County during the last two years.

Two members of the group leave the house. Each carries a small device in a backpack that was pre-assembled weeks before. One device contains high explosives in a shaped charge. It is designed to rip the pipe open. The second device is an incendiary bomb, designed to ignite the gasoline. Both have timing devices.

The group hopes the explosion and subsequent fire will carry over to surrounding buildings and cargo in the rail yard. They will succeed beyond their wildest dreams.

The men ride bikes from their house to a nearby entrance to the regional park. They then ride through the park on a path that leads to the railroad yard. They have selected the location because it is easy to get to but masked from nearby homes and commercial buildings. The bombs are quickly placed on the pipe and the timers set.

The men are not suicide bombers. They want to ensure their own safety, but they also wish to minimize the amount of time the bombs will be subject to discovery. They determine that three minutes will give them ample time to be out of the area while presenting only a small window for possible discovery. Three minutes later, at 9:08 a.m., the bombs explode.

The effect is better than expected. The gas and fumes gushing from the pipe explode in a huge fireball that ignites nearby vegetation at the foot of the hill bordering the yard. The fire quickly spreads through a small adjacent canyon as well.

Pushed by dry northeast winds gusting to 30mph, the flames quickly climb the slope toward the crown of the hill. The winds also push the flames to the east and west along the face of the slope. Within fifteen minutes of the explosion, flames traveling along the eastern slope reach apartments and homes at the western edge of Martinez.

G. RESPONSES/DAMAGE

Long-standing operational plans are automatically activated following the initial earthquake. Area Emergency Operations Centers (EOCs) are fully staffed including the regional EOC's in Oakland for Alameda County and Martinez for Contra Costa County. Emergency response agencies begin to compile a list of priority calls in their respective areas. State and local public works agencies deploy to assess road, bridge and building damage.

The 9-1-1 emergency phone system is overwhelmed. The handful of Public Safety Answering Points (PSAPs) in the region that are responsible for receiving 9-1-1 calls are staffed for normal operations. The amount of calls quickly places them in a crisis mode. 9-1-1 calls go unanswered or callers are placed on hold. To keep critical lines open, the phone company resorts to an emergency number priority dialing system that delays the dial tone in most residences and businesses for 2-5 minutes. The average citizen is not aware of the delayed tone. Consequently, most individuals that attempt to use a telephone construe the silence as a sign of a dead phone.

The combined impact on the phone system results in no report about the Martinez fire reaching the Contra Costa Fire District for 15 minutes. Responding units arrive within approximately 21 minutes. By then, the winds have continued driving the fire southward along the eastern slope. Several buildings are burning and the fire is minutes away from dense housing on the slope just north of the Contra Costa Regional Medical Center and Alhambra High School. On-scene units call for additional help. The Contra Costa units responding from Martinez cannot see the far western edge of the fire. They cannot project its path or the current fire edge in that direction, but they assume the worst, asking dispatch to alert West County fire agencies.

There is no immediate evidence the explosion was intentional. Firefighters initially assume it is accidental. The location is not considered to be or treated as a crime scene.

Following the earthquake, Contra Costa's microwave system remains operable, as do most emergency radio systems. Alameda's system is also operable, but both cell and landline telephone systems make communications difficult.

Damage assessments begin trickling in, but it will be hours before a fairly complete picture is formed, and days before the real extent of damage is known. Some of the more critical damage is sustained by hospitals in western Alameda and Contra Costa counties. Nearly every hospital in this narrow corridor is built on or near the fault. Most are housed in older buildings that have not been retrofitted to current seismic safety standards. An estimated 60% of all beds in Alameda and 15 % in Contra Costa are lost as

hospitals sustain major damage. Although seven of Contra Costa's eight full emergency centers survive the initial quake, only one in Alameda fairs as well.

Logistics and transportation are also hit hard. All three major airports are built on fill subject to liquefaction. All three suffer major runway damage, closing them to everything but vertical lift traffic. Livermore and Byron—two small airports—remain open. Buchanan loses its tower, but its runways are relatively intact. However, the combination of the lost tower and smoke from the spreading Oakland Hills fire force it to shut down.

Two of the three east-west highways through the Oakland Hills are shut down. Highway 4 from Martinez to Hercules is shut through Franklin Canyon due to numerous slides and road buckling. The adjacent surface road is also shut due to the same slides, and the parallel railroad tracks sustain major damage. Highway 24, connecting Highway 680 to Oakland, is shut due to tunnel collapses, slides and major buckling in the Lafayette area. Only Highway 580, connecting east and west Alameda through Dublin and Hayward remains open through the Oakland Hills. To the east, the highway is closed at the Altamont Pass between Livermore and Tracy due to slides.

In far eastern Contra Costa, several Delta levees have been breached, flooding a number of islands, including heavily populated Bethel Island, washing out railroad tracks and flooding Highway 4.

Cal-Trans quickly examines and declares most major area bridges or their approaches damaged, closing all but the Carquinez Bridge connecting Vallejo with Western Contra Costa County via Highway 80. Although the bridge itself remains open, the approaches on the Contra Costa side are closed due to slides, buckling and a fire at a refinery in Rodeo adjacent to the highway.

Making Highway 80 even more impassable, flooding from a dam collapse has damaged the highway, cutting West Contra Costa in half. The San Pablo Reservoir, an earthen dam, had been declared seismically unsafe in 2004. As a result, the dam has been kept at 60% capacity until repairs are completed. It was felt that, with the lower water levels, the dam could withstand a major earthquake. Unfortunately, Briones Reservoir, a

concrete dam located in the hills above San Pablo Reservoir did not hold. Briones burst, sending its water into San Pablo Reservoir, breaching the lower dam. Everything downstream, from El Sobrante to the Bay, and from North Richmond to the Hilltop Mall at the Richmond-San Pablo border is ravaged by the floodwaters.

1. October 3rd, 10:00 a.m.

The fire has crested the hills where the low shrubs and tall grass provide fuel as it drives south toward heavily timbered areas. On the west slope, the flames have reached the first dwellings—the small enclave of Port Costa. Fire crews are able to force the fire around the town, but the fire continues westward toward Crockett.

In Contra Costa, the fire has already ignited dozens of older homes on the steep slopes. It is rapidly approaching the Regional Medical Center and Alhambra High School. Fire officials have requested help from San Ramon Valley Fire, but the two districts only have a total of one hundred fifty firefighters on duty, and additional fires and rescue needs compete for personnel and equipment. A request for mutual aid is sent to the California Office of Emergency Services via the regional mutual aid coordinator in Oakland.

Agencies to the immediate east and south are too involved in fire and rescue operations of their own to provide aid. Major population areas further east including Sacramento, Stockton and Modesto are asked to provide assistance. Aid is organized quickly, but with so many road closures, getting to the scene will be difficult and slow.

The state quickly assesses available assets. There are almost no immediate military resources available. Both Army and Air Guard units have been activated where available. Neighboring states have nothing left that is not committed elsewhere. Federal fire fighting equipment and manpower is also committed. Helicopters can be brought in from central and eastern portions of the country, but given flight time and crew rest requirements, they will not be available for three-to-four days.⁵⁶

⁵⁶ Scott Daly (Commander, Field Operations, Contra Costa Office of the Sheriff) interview with author, Martinez, CA. May 18, 2005.

Military and FEMA cargo planes are available to transport manpower, equipment and supplies, but the combination of airport and ground transportation disruptions makes it highly unlikely that significant aid can reach the impacted area for several days.

2. October 3rd, 10:30 a.m.

FEMA identifies a forward command center at Travis Air Force Base in Fairfield, but the base is on the north side of the Sacramento River, leaving no way to effectively deliver aid to the region. The lack of vertical lift capabilities further exacerbates this situation.

Contra Costa Fire is forced to call for an evacuation of the hospital and high school, as well as residents and businesses on the west side of Alhambra Avenue in Martinez. Ironically, this includes the house used by the terrorists.

There is no evacuation plan for the hospital, and transportation needed to relocate the patients has not been identified. John Muir-Mt. Diablo Hospitals and Kaiser Hospital—all in Central Contra Costa—prepare to accept patients from Regional, but only a handful of ambulances are available.

School buses are eventually located to assist with the relocation and a clear transportation corridor to other area hospitals is identified, but securing transportation and loading all patients will take hours. The fire is less than an hour away. Hospital staff begins moving individual patients to streets across Alhambra Avenue.

Area fire and police agencies are having considerable problems in their own jurisdictions. Outside agencies are finding it difficult to reach the affected area. California has limited fire crews and equipment in the area. There are no National Guard units in the affected area—all are deployed elsewhere, and little else left throughout California.

3. October 3rd, Noon

The state deploys seventy fifteen-man inmate fire crews, mostly from across northern and central California (the remaining 180 crews are already deployed in the south). It also commits what few air tankers it has remaining in reserve. With no Guard helicopters available, only a handful of water platforms can be quickly located. Although helicopters are preferred by fire officials when they can be obtained in adequate numbers

and can maintain a round-trip dumping time of four minutes or less, the small number immediately available come nowhere close to the amount required.⁵⁷

Federal agencies determine that, given flight time and the need to rest the crews, additional helicopters from the federal fleet cannot be put into service in the Bay Area for 3-4 days. By then, the major damage will have been done.

On the west, hampered by the flooding, road closures and competing needs, firefighters are losing ground to the fire. Calls for heavy equipment are mainly unanswered except by local contractors that can be contacted. Cal-Trans deploys the equipment it has, but much has been dispatched to the south and several other pieces must be deployed to work on opening key roads. The Guard has no engineering or transportation units available. Air lifting in heavy equipment or personnel is not immediately possible due to a lack of usable airport runways and no vertical lift craft.

4. October 3rd, 2:00 p.m.

Combined efforts by both West and Central Contra Costa fire crews to create firebreaks across the hills are unsuccessful due to both a lack of manpower and air transport. Getting ample personnel and equipment into the affected areas in time proves to be impossible. Contra Costa and San Ramon Fire Departments conclude they do not have the resources necessary to stop the fire from continuing to spread south.

Fire crews are able to contain the fire on the west side of Alhambra Avenue in Martinez even after it jumps Highway 4, but they are not able to stop it from reaching hillside homes, forcing thousands to flee. By mid-afternoon, an evacuation has been initiated for the entire area west of Alhambra/Pleasant Hill Road to Highway 24, including all of the Lafayette, Moraga and Orinda areas. South of Highway 24, evacuations are ordered for everyone west of Danville/San Ramon Valley Roads.

In western Contra Costa and Alameda counties, fire agencies take a stand at Highway 80 south to Highway 24, and at Highway 13 south of that point to 580.

⁵⁷ Chris Suter (Assistant Chief, San Ramon Valley Fire) interview with author, Danville, CA, May 4, 2005.

Police agencies are unable to provide adequate manpower to effect an orderly evacuation on either side of the hills. Without historical Guard resources, there is no way to get either fire fighting or security forces into the area quickly. Evacuations become routs as fleeing residents clog the few streets open.

The Red Cross is overwhelmed. Area shelter locations are quickly identified, but there are no supplies, medical assistance or aid personnel authorities can get to the sites, and getting shelter information to the thousands being displaced presents a huge problem.

The same is true for all incoming assistance—it can't reach those most in need and the continuing spread of the fire keeps the situation highly volatile.

5. October 3rd, 4:00 p.m.

As the fires in the Pacific Northwest are contained, outside crews and equipment are redeployed to the Bay Area where the need is considerably greater. DMAT units from across the country are also deployed, but the need is for beds and operating capabilities and the teams, like everyone else, can't readily get to those most in need of assistance. FEMA deploys its emergency response teams to aid in search and recovery efforts, and they too are blocked far short of the most affected area.

Off-duty fire, law enforcement and emergency medical personnel that were counted on to provide relief do not appear. Two main reasons for this emerge during post-event analysis. The first is that, as most agencies had known for many years, a large percentage of their personnel live out of the area where the cost-of-living is much lower. This group could not get to their area of assigned responsibilities due to the road, bridge and rail closures. Another major reason was that emergency workers—especially ones with young children—were not willing to leave their families. As a result, on-duty personnel at the time of the earthquake remained the only staffing available for most area agencies during the first forty-eight hours.

After the first twenty-four hours, the safety and effectiveness of emergency response personnel is seriously in question. Agencies are forced to cut their available forces in half to provide much-needed rest.

6. October 3rd, 8:00 p.m.

The fire has passed Buchanan Field allowing officials to declare it available for relief efforts, but the lack of a tower and relatively short runway force authorities to wait for daylight to begin transporting in relief manpower, equipment and supplies.

7. October 4th, Daybreak

Relief efforts begin as Buchanan Field is opened. Cargo planes begin to land and unload, but a lack of space limits the number of aircraft on the ground at any one time, and a lack of fuel requires planes to take extra time to refuel at Sacramento and Stockton airports.

8. October 4th, 10:00 p.m.

Oakland Hills fire has driven through the Lafayette-Moraga-Orinda area and is heading for Alamo-Danville in the central county area. On the west side of the hills, it has raged through Berkeley and the North Oakland hills overnight. It is nearing Castro Valley where Highway 580 should act as a southern barrier. All available manpower and equipment is deployed to that area in a maximum effort to stop the fire from traveling further south. Santa Clara fire units have managed to get through to the area as well. As additional crews and equipment land at Buchanan, they are also sent south to Highway 580 and to the western edges of Danville and San Ramon in hopes of halting the further destruction of buildings in those areas.

9. October 5th, 1:00 a.m.

The Oakland Hills fire is declared contained on the south at Highway 580. On the east, it was kept above the building line in San Ramon and most of Danville. On the west, the fire still burns through parts of the hillside and into the flatlands adjoining the Highway 80/880 corridor.

As relief crews replace exhausted fire, police and medical rescue units, the effort quickly turns from response to recovery. FEMA and numerous other search and rescue teams from throughout the country respond. There is still a huge lack of adequate shelter, and medical assistance remains inadequate.

FEMA begins organizing additional medical relief teams, but there is a tremendous lack of facilities. The Guard transferred all field hospital resources to the

Army Reserves several years ago. All regular and reserve military medical units are deployed overseas, leaving no military resources available.

Aid workers begin manning emergency centers as long-term shelter operations commence. Initial recovery efforts continue for several weeks. Long-term recovery will take years.

H. AFTER ACTION REPORTS

During post-event critiques, several facts were identified and generally agreed upon:

- Initial damage from the earthquake included approximately 25,000 fatalities and 80,000 serious injuries. Approximately 200,000 dwellings and 40,000 other buildings were destroyed or damaged to the point of not being habitable.
- The Oakland Hills fire and subsequent evacuations caused 4,000 fatalities and over 20,000 serious injuries. The fire also destroyed another 35,000 buildings.
- One million people are left without shelter in Alameda and Contra Costa. Total damage estimates are expected to reach several billions of dollars.
- The inability to provide significant aid within the first twenty-four hours caused an estimated 15,000 additional fatalities and several thousand more injuries. These latter figures are attributed to four primary causes: limited back-up resources available within the affected area, especially manpower; geographical isolation caused by a combination of road, rail and airport closures; multiple events occurring in the same part of the country, spreading resources out more than usual; and the lack of a substantial response capability within the state.

The most critical deficiency was considered to be the almost total lack of National Guard resources available—something the state had heavily depended upon for the last sixty years. Once a force of twenty thousand, the California National Guard had been reduced to less than 2,000 trained and available troops.

Air resources, in particular vertical lift aircraft, had been deployed overseas, leaving the area without alternatives. Engineering units that could have been used to clear roadways and re-open runways were also missing. Little remained, in the form of either manpower or equipment, to establish and man aid stations and emergency shelters. No security forces were available to aid law enforcement agencies in securing damaged areas

or to respond to numerous riots that broke out in the following days. Fire and other rescue personnel had little military help in search and rescue operations, and limited aid from other emergency response agencies for the first two days.

The Guard, once considered one of the most critical manpower and equipment resources in the state, has become a non-entity and no alternative resource has been found or identified. The void created by this situation directly attributed to thousands of deaths and the destruction of billions of dollars worth of property.

I. SCENARIO CONCLUSIONS

Even the most valid scenario is written to lead the reader to some determined point of view. This incident is no exception. It was designed to demonstrate just how important the loss of immediate military assistance during a major event could be. But designing for a single effect is not necessarily invalid.

In this scenario, events that have occurred—the Oakland Hills fire and explosion involving a high-pressure gas pipeline—were combined with one that is extremely likely to occur—a major earthquake on the Hayward fault. Even the timing and weather follow historical events—both the 1989 Oakland Hills fire and the Loma Prieta quake (the last large Bay Area earthquake) took place in October.

The enormous amount of damage to the transportation infrastructure in the scenario is well within the parameters thought likely by planning experts. The kind and level of local resources, if anything, was overplayed. In a real incident of this kind, the sheer amount of work put on emergency responders would be overwhelming. It is likely, for example, that only a fraction of available firefighters would be dedicated to fighting the Oakland Hills fire. Most would be devoted to search and rescue operations.⁵⁸

The lack of outside resources that would be immediately available was accurately portrayed. Even without the fires in Southern California, Washington, Oregon and Idaho—a combination of events that has been experienced more than once in recent history—there would not be adequate assistance available within the first few hours to

⁵⁸ Chris Suter (Assistant Chief, San Ramon Valley Fire) interview with author, Danville, CA, May 4, 2005.

contain the fire. There is a real inadequacy in portable hospital capabilities and a true lack of available Guardsmen in most states. Most important of all, there is an absolute lack of resources that could be brought to bear in such a case during the first twenty-four hours. That period was agreed upon by the subject matter experts from local jurisdictions as the most critical in determining the success of response and rescue operations versus turning efforts into recovery.

VIII. SUMMARY AND RECOMMENDATIONS

The Post-9/11 era is marked by many new challenges never before experienced in our history. It has lead to a broadening U.S. military presence throughout the world for combat, security and relief missions.

This build-up of overseas missions arrived after years of military downsizing. Just maintaining the present manpower needs in Iraq and Iran has created substantial backlash for the military. Active duty units have had their tours of duty extended, individual soldiers due for release have been forced to stay, call-ups of Individual Ready Reserves have taken place for the first time in decades, and talk of returning to an involuntary draft system has stirred substantial debate.

To meet immediate personnel needs, the military has thrown in National Guard and Reserve units. According to the military's own estimates, Guard and Reserve units now comprise about 40% of all troops stationed in Iraq and Iran, and that number is predicted to rise as additional units rotate back.

Although use of the National Guard for overseas combat missions is not a new phenomenon, the level of present commitment exceeds any experienced since World War II, and it comes at a very critical time.

National Guard deployment for homeland security is also experiencing a heightened level of need. In addition to its traditional roles in support of civil authorities during and following major disasters, the Guard has been tasked with new missions as well. Immediately following the 9/11 attacks, thousands of Guardsmen were deployed to secure domestic military bases. More thousands provided critical infrastructure protection for airports, bridges and other key locations. Air National Guard units have been, and continue to be, deployed for combat air patrols over major cities.

The combined effect of the dual roles on the Guard is becoming more evident with each passing month. It is simply being stretched beyond its ability to maintain high mission levels in all areas of responsibility. Its current commitments, which are not likely to decrease in the near future, will soon become mutually unsustainable. Given the

military's primary role in defense of the United States—a philosophy clearly held by the Department of Defense—the need to use Guard units overseas will almost certainly increase and will overshadow its domestic security roles. This trend has already manifested itself in several easily recognized ways.

Dual role responsibilities are causing National Guard recruitment efforts to run well below goals for the first time in many years. High personnel tempo rates have resulted in a decrease in the number of Guardsmen that extend their Guard contracts, and it has lead to a parallel decrease in recruitment of active duty personnel for Guard duties—which has traditionally counted for nearly half of all new Guard sign-ups.

Training for primary specialties has been jeopardized because of domestic mission levels, and combat readiness has been similarly affected, increasing the length of time it is taking to prepare activated Guard units for overseas deployment.

Guard equipment is being used at a rate that significantly increases maintenance costs and reduces its anticipated life expectancy. Estimates by Guard command staff suggests a need for an additional \$ 20 billion to replace this rapidly aging equipment at a time marked by increasing national deficits and expanding costs to maintain overseas operations.

With expanded use of the Guard for overseas deployment, a loss of availability for domestic missions has followed. States are beginning to recognize this trend. Governor's are expressing concern over the percentage of Guard personnel activated and the loss of key equipment used to fight fires, provide security, transport personnel and supplies to disaster areas, and assist with other response and recovery missions.

In some instances, Guard resources can be replaced by other federal assistance but for many needs, there is no available alternative. This is the crux of the problem. Civil authorities have come to depend upon Guard resources during major incidents and for assistance in post-event management and recovery. As military needs continue to use ever-increasing amounts of Guard capabilities for homeland defense priorities, fewer of those resources will be available to states and local jurisdictions.

Although warning signs are becoming evident, and key individuals—including Guard and Reserve commands and governors—are starting to understand the possible consequences, there is still no effort to systematically approach this problem on the federal level. For the most part, local jurisdictions seem to simply ignore the warning signs as well.

At some point it is likely that, without proper planning, emergency managers and responders will be confronted with a significant and irreplaceable loss of resources needed to contain, control and recover from a major event. When that happens, officials at all levels of government will be forced to deal with the issue. It seems more efficient, and certainly more logical, to address the problems now, before they become Draconian.

This paper does not provide a complete answer to that question—that is an entirely separate and complex project of its own—but some general observations and suggestions can certainly be included.

A. RECOGNIZE THE PROBLEM

Planners routinely consider possible losses of communications systems, access to affected areas due to road failures, loss of water and power and other contingencies when creating strategic response plans. The potential loss of military support represents just one more contingency planning area—albeit a very critical one. NEMA and similar organizations need to bring this issue to the forefront of critical incident management discussions.

B. DEVELOP DEPENDABLE ALTERNATIVE RESOURCES

EMAC is an excellent beginning to a multiple state, trans-national aid system that relies on first responders helping first responders. Its major drawback is that, like most mutual aid pacts, it remains voluntary. Although this format has worked in early examples such as the recent devastation caused by hurricanes Ivan, Frances and Charley, some long-term dependability needs to be brought into the equation. In addition, there was still a major dependence on military assistance.

C. INCREASE VOLUNTEER RECRUITMENT AND TRAINING

There are thousands of first responders throughout the country than can be called upon to assist with a local problem through EMAC and similar agreements. There are

millions of potential citizen volunteers as well. Two models that deserve consideration are the DHS Citizen Corps and the Law Enforcement Volunteer program (LEVOLS) developed by the Salt Lake Organizing Committee for the 2002 Winter Olympics.

The Citizen Corps, which is modeled along the lines of previous Civil Defense volunteer efforts, develops and trains local community groups to aid in times of disaster. Information on this program is readily available on the Citizen Corps Website.⁵⁹

The Utah LEVOLS depended upon professional law enforcement personnel from several states agreeing to volunteer for security duties during the Olympics. This approach is promising, but at least two pitfalls are readily identified.⁶⁰

The first is dependence upon first responders to volunteer their time. For a high profile venue, such as the Olympics, that have a high personal appeal among first responders, such an approach might work, but attempting to use this type of resource across the all hazards spectrum is problematic.

The second is dependence upon these same workers to perform work for free than might otherwise be considered part of his/her regular paid duties. Based on recent court decisions, this might represent a violation of the Fair Labor Standards Act. If challenged, this would stop a California officer, for example, from performing any kind of volunteer work within the state, including anything that s/he might do through a statewide mutual aid agreement.

This has not been a problem in interstate events because a first responder could not normally be expected to provide out-of-state services as part of their regular paid duties, but the development of EMAC may quickly change that particular exemption.

D. STRATEGY FOR HOMELAND SECURITY

This strategy calls for the development of national training and certification requirements for first responders. Such a universal approach would strengthen and support EMAC and other mutual aid programs by standardizing first responder capabilities.

⁵⁹ Citizen Corps, <http://www.citizencorps.gov/index.shtm> [Accessed February 15, 2005].

⁶⁰ *The Olympic After Action Report* (unpublished. Report, December 2002), n.a.

The danger in this approach is that it amounts to a federalization of local responders most likely achieved through the persuasive power of federal purse strings. Taking such an approach assumes federal authorities are experts in emergency response requirements—a dangerous assumption—and is certain to face extremely stiff resistance from states and local jurisdictions. On the other hand, developed properly and in partnership with state and local authorities, the effort could produce a much more consistent responder cadre.⁶¹

E. DEVELOP AN ALL-HAZARDS TRAINING AND TESTING AGENDA

It is extremely unlikely that the scenario presented in this paper could currently be used as the basis for a regional exercise, even though it would arguably provide invaluable data about the area's collective ability to respond to and mitigate casualties and damage following a major event. The priority placed on terrorist events by the federal government is one major reason why we aren't likely to see such a training event.

Even tabletop exercises can be costly and full-scale events involving field units are extremely expensive. They are also disruptive to regular operations. For these reasons, the number of training exercises is limited by both operational and budget considerations. Practically speaking, federal emphasis on terrorism has forced most jurisdictions to concentrate on exercises involving such acts because they can receive reimbursement.

In fairness, another reason is that emergency planners tend to build exercises around single incidents rather than a chain of events. Such exercises are simply easier to conduct. What they don't do is test for real response capabilities under truly adverse conditions, instead preferring exercise parameters that focus on individual kinds of events. A review of regional training exercises in Contra Costa County—home site of the scenario—supports this contention. Since 9/11, the region has conducted at least two exercises each year. These exercises, sponsored by federal grants, concentrated solely on terrorist acts. Not one single exercise in the past four years has focused on a natural disaster, and none have involved more than a single event. To truly understand system

⁶¹ Office of Homeland Security, *National Strategy for Homeland Security*, 45.

capabilities, agencies should be tested for responses under extreme conditions, and exercises should be geared to review generic response capabilities, not incident-specific ones.

F. CONDUCT A THOROUGH, SYSTEMATIC ANALYSIS OF CURRENT AND FUTURE TRENDS AND INCIDENTS

This would have to be a completely objective analysis conducted by a specially tasked group approach like that used in establishing the Gilmore Commission.⁶²

These ideas represent starting points only. They are not presented as a cure-all for an emergency response system that is in serious peril due to a lack of comprehensive contingency planning, but they do provide a platform from which a more consistent and complete planning process can be created.

The research presented in this paper points to a need; actually a series of needs that start with a more systematic approach to emergency response and recovery planning that is based upon an all hazards, all contingency model. It identifies an area of real, not just theoretical importance that can but has yet to be addressed.

The scenario presented combinations of events that are collectively possible and individually probable. It also identifies specific resource needs that were once available from the National Guard. In many cases, those lost resources have not been replaced.

Most critical of these is rapid (within the first twenty-four hours) access to air support—particularly vertical lift assets—manpower, engineering and transportation units, shelters and portable hospitals. For a combination of reasons, none of these resources is currently available. Even without the fires in Southern California, there would not be sufficient Guard units available in the state to provide much needed assistance of the kinds described.

⁶² Official title: Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction, established pursuant to Section 1405 of the Strom Thurmond National Defense Authorization Act, 1999.

The severity of the problem is just now gaining some public recognition as states begin calling for a review of how National Guard resources are being used and what the associated impact on local communities is when these resources, once so heavily depended upon, dry up.

The impact would be less critical if the current use of the Guard for homeland defense missions was short term. Unfortunately, all indications are that the problem will continue for some time and possibly even be exacerbated as the combined impacts on recruitment and retention, coupled by a growing federal deficit, are felt.

It is imperative that these issues be brought before a public venue; that they be given the consideration they deserve and realistic, workable resolutions identified. The alternative is a continuing deterioration in homeland security precisely at a time when our country is threatened not only by historic kinds of incidents, but the very real possibility of major terrorist attacks as well. We have been fortunate not to experience a major terrorist attack since 9/11, but Hurricane Katrina certainly qualifies as an example of just how badly our response capabilities have deteriorated in the last few years, and the critical issues mentioned above are beginning to surface as a result.

At the time of this paper's publication, both emergency response and initial recovery efforts were still under way, making it far too early to reach any final conclusions about what went right or wrong in this catastrophe, but some preliminary observations are certainly in order.

Local, state and federal authorities have been equally blamed in the media for major deficiencies in both preparation and response to the storm, particularly in the New Orleans area. Before the dust has even settled (literally), Michael Brown, Director of F.E.M.A. was first replaced in the field and then resigned. Michael Chertoff, Secretary of Homeland Security, has been harshly criticized and President Bush has publicly acknowledged a weak and delayed federal response, and has taken responsibility for it.

One early editorial that may prove to be very close to the truth was the September 19, 2005 article by Time Magazine—*An American Tragedy: 4 Places Where the System*

*Broke Down.*⁶³ Time provided a fairly strong argument for spreading the blame among the mayor of New Orleans, governor of Louisiana, F.E.M.A. Director Michael Brown of Secretary of Homeland Security Michael Chertoff. One of the most critical deficiencies will almost certainly be identified as a slow and relatively weak National Guard response. According to Time, four days after the hurricane struck Louisiana, Governor Blanco still only had a little over 13,000 National Guard soldiers under her command even though she had requested 40,000 troops, and to get even that many, 29 states had to activate and deploy units to Louisiana (page 39).

Steve Bowman, Lawrence Kapp and Amy Belasco, three national defense specialists with the Congressional Research Service, wrote a more noteworthy early critique. Although meant as an initial review only, the report nevertheless outlines the major areas of concern that will likely be at the center of future reports. These include timeline of the response and possible types of failures (p. 13), command of the Guard and federalization of the evacuation questions (p. 14) and the impact of overseas deployment of Guard troops in terms of availability of both personnel and, of equal importance, equipment (p. 14).⁶⁴

The attention this event will focus on our readiness and ability to respond effectively to major disasters may bring the issues discussed in this paper, and other related matters, into the central political arena. It is unfortunate that it took such a colossal tragedy but, if it can be said that anything positive could possibly come out of Katrina, this incident may turn out to be the saving grace for our emergency preparedness system.

⁶³“An American Tragedy: 4 Places Where the System Broke Down,” *Time* (September 19, 2005): 35-41, n.a.

⁶⁴ Steve Bowman, Lawrence Kapp and Amy Belasco. *Hurricane Katrina: DOD Disaster Response* (Washington D.C., Congressional Research Service, Library of Congress, order code RL330950), September 19, 2005.

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